Saskatchewan
Alcohol and
Drug Abuse
Commission

Treating Alcohol Problems

Supplementary Readings

Edited by Saul Cohen, M.D.

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Saul Cohen, M.D.

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Introduction

Alcohol use and abuse directly and indirectly contribute to the morbidity and mortality which occur in our society. The family physician can help to reduce these consequences by screening routinely for alcohol problems.

The knowledgeable and interested family physician is in an ideal position to detect and confront alcohol problems in the earliest stages. Once a problem has been identified, the family physician can introduce the patient to a broad spectrum of health professionals and agencies to facilitate the treatment of this complex multifactorial disease before it becomes chronically disabling and more difficult to manage.

To aid the family physician in the early identification and treatment of alcohol problems, this companion volume to *Treating Alcohol Problems: The Family Physician's Guide* contains in-depth reference material based on the practical clinical experiences of many diverse professionals from Saskatchewan and elsewhere. These readings will assist the family physician to help patients accept the problem of alcohol dependency, understand its consequences, and recognize the need for treatment. They will also assist physicians to present treatment options and develop personalized treatment plans. In this way, more severe problems will be prevented.

Saul Cohen, M.D.

1 Diagnosis and Treatment

Early intervention for alcohol problems*

Harvey A. Skinner, Ph.D.

Addiction Research Foundation, and
Department of Preventive Medicine and
Biostatistics, University of Toronto

Stephen Holt, MB, FRCP(C)

Department of Medicine,
University of Saskatchewan

SUMMARY. Despite awareness of the wide variety of clinical and laboratory abnormalities associated with alcohol abuse, drinking problems often remain undetected in clinical practice. There is increasing evidence that problem drinking can be successfully treated by brief intervention. The general practitioner is in a good position to identify patients who drink excessively, and to intervene with brief counselling at an early stage when prognosis is more favourable. A practical strategy is described for diagnosis and intervention that could be readily implemented in clinical practice.

Introduction

The recognition of alcoholism as a major health and social problem has prompted calls for action from the medical profession in the United Kingdom,[1,2] United States[3] and Canada.[4] Medical management of alcohol-related disorders has focussed on tertiary prevention, where limited impact has been achieved in terms of reduced morbidity and mortality.[5-7] Alcohol availability and cost have been repeatedly identified as determinants of increased alcohol consumption in western society. Legislation which controls the availability of alcohol, and a taxation policy that maintains a high cost of alcohol relative to the consumer price index would be an effective preventive measure.[8-11] However, the implementation of controls on access to alcohol is largely a political decision.[12] The medical profession must accept some responsibility for confronting alcoholism, but by what method?

New initiatives have been called for in helping people who misuse alcohol.[13] The early detection of alcohol abuse is one strategy that has received increased recognition and research support.[14-17] The general practitioner is often in a good position to identify patients who drink excessively but who do not consider themselves as 'alcoholics'. General practitioners may intervene with brief counselling at an early stage when prognosis for recovery is more favourable. The basic strategy is to take action before the patient has developed major symptoms of alcohol dependence,[18,19] since there is a better prognosis with socially stable individuals at earlier stages of problem

* Reprinted with permission from *The Journal of the Royal College of General Practitioners*, December, 1983, *33*, pp. 787-791.

drinking.[20] This approach is consistent with the call for less intensive, but more focussed interventions for alcohol problems.[21,22]

Do physicians avoid the detection and treatment of alcohol abuse?

It is commonly believed that alcoholics may deny or minimize the presence of drinking problems. This situation is compounded by some physicians who engage in their own form of denial.[23] General practitioners may be reluctant to raise the issue of excessive drinking when it is suspected as a determinant of the patient's clinical signs and symptoms. Such a passive attitude may have resulted from pessimism about the chances of success in treating alcoholism.[24] Rubington[25] has portrayed the situation as a game of 'hide and seek'. Although the hiders (alcohol abusers) and seekers (physicians) may engage in the game either actively or passively, evidence to date suggests that both participants tend to accept a passive role. One study of physician-patient contacts revealed that patients were usually willing to describe concerns about their drinking habits, but they were not likely to do so spontaneously.[26] Instances were found where the physician failed to pursue signs and complaints related to alcohol abuse. An extreme case was reflected by the comment that 'alcoholism is a serious problem here and something will have to be done about it, but not by me!'

There is evidence that a large number of cases of alcoholism pass unrecognized, often owing to the lack of recording an adequate drinking history.[27] In one study, the chief medical officers failed to detect approximately half of the alcoholics attending the emergency ward.[28] Another study in Edinburgh[29] found that 32 per cent of patients attending the emergency department of a district general hospital had a blood alcohol level that exceeded 17.4 mmol/l (80 mg/100 ml). In addition, adult pedestrians with a blood alcohol concentration exceeding 17.4 mmol/l had over a threefold increase in relative risk of sustaining injuries in road traffic accidents.[30] Because of the association between excessive drinking and traumatic injuries, the hospital emergency department presents a prime location for the detection of alcohol abuse. However, these busy departments often lack a clear policy and adequate resources for the assessment and follow-up of patients with suspected drinking problems.[29] Clinical studies have found that alcoholics require almost twice the amount of diagnostic radiology,[31] and that problem drinkers consult their general practitioner at a higher rate than average.[32]

Although excessive drinking can result in a wide spectrum of clinical disorders, many of these abnormalities are evident only after an individual has a prolonged history of alcohol abuse.[17,33] The more promising biochemical markers of excessive drinking, such as gamma-glutamyl transpeptidase (GGT) and mean corpuscular volume (MCV), have only moderate diagnostic sensitivity in ambulatory

populations, and these tests may return to normal following a short period of abstinence or a significant reduction in alcohol consumption.[17] Recent studies[34-37] have shown that diagnostic accuracy can be enhanced by the combined use of laboratory tests. In a comparison of laboratory tests and questionnaire data,[36] the best laboratory test detected only a third of alcoholics, whereas three brief interviews each identified nine out of 10 alcoholics. The authors concluded that the brief interviews, which take about one minute, have considerable potential for routine screening among patients.

Given the findings that brief questionnaires may be useful for the identification of alcohol abuse, one might question why a diagnostic instrument such as the CAGE[38] is not given routinely as part of a diagnostic medical history. The CAGE is an acronym derived from questioning whether the patient feels a need to *C*ut down on drinking, is *A*nnoyed by criticism of his/her drinking, feels *G*uilty about drinking, and ever drinks first thing in the morning (*E*ye-opener). It is increasingly recognized that the systematic use of brief questionnaires, consideration of laboratory tests (for example, GGT, MCV) and recording of blood alcohol levels among emergency service patients would result in the identification of many patients who misuse alcohol. The Advisory Committee on Alcoholism[39] has pointed out that health care professionals frequently lack knowledge about how to deal with alcohol-related disorders and they often feel uneasy when in contact with problem drinkers. By inference, the apparent dilemma may have less to do with the accuracy of screening tools, and more to do with knowledge of effective strategies for dealing with problem drinkers once they have been identified.

1. *Emphasize early identification*
   - Socially stable individuals at earlier stages of problem drinking have a better prognosis
2. *Conduct a systematic assessment*
   - Examine patterns of alcohol and drug use
   - Assess the degree of alcohol dependence
   - Review medical history and psychosocial functioning
3. *Engage in a single counselling session*
   - Review assessment findings with patient and family
   - Present evidence of physical damage related to drinking (for example, raised GGT, MCV)
   - Emphasize responsibility of the patient and family for working on goals
   - Set drinking goals (abstinence or moderation)
   - Set goals in other key areas
   - Refer (if needed) to other agencies or professionals
4. *Provide self-help manuals*
   - Prescribe steps to stop drinking or control drinking
   - Provide guidance in other areas (for example, stress management)
5. *Conduct periodic follow-up*
   - Ask patients to keep a daily drinking log
   - Monitor physical indicators of heavy drinking (for example, GGT level)
   - Review progress on goal attainment
   - Refer (if needed) to other agencies or professionals

Figure 1. *Basic strategy for patients with alcohol problems.*

Basic strategy for dealing with problem drinkers

Recent evidence suggests that brief advice by physicians or allied health workers is an effective and practical intervention for many alcohol abusers.[22] Moreover, an intriguing demonstration of the potential impact of collective efforts by physicians was given by a study of advice against smoking.[40] Rather than increasing the success rate among those who attempted to stop smoking, the main effect of advice in this study was to cause more patients to try to reduce or cease smoking. Similarly, the primary impact of brief counselling with

patients who misuse alcohol may be to motivate a higher proportion of patients to cut down on their alcohol use. Hence, there would appear to be ample justification for the growing interest in selective screening for alcohol abuse in hospital and general practice.[41]

Figure 1 outlines a basic strategy for diagnosis and intervention in patients who have drinking problems. This approach could be readily implemented in general practice and hospital settings. The vital elements are to have systematic procedures for case identification and assessment,[16,17,42-45] to employ a brief counselling intervention[21,46,47] that may be conveniently used in busy clinical settings, to supplement the brief counselling with self-help manuals[48,49] to engage in a systematic follow-up of cases[50] at regular intervals (say, every three months), and to have available a backup referral mechanism for patients who do not respond favourably to brief intervention or for patients who require a more intensive level of treatment.[51,52] Given time constraints of a busy general practice, it may be more practical to enlist the help of a practice nurse or social worker. This strategy is consistent with the primary level role of general practitioners recommended in a report by the Advisory Committee on Alcoholism.[53] Where possible, problem drinkers should be helped by health professionals in their general roles. The report also emphasizes the need for each community to establish a team with specialist skills (secondary level) in the treatment of alcoholism that would provide consultation and specialized treatment as a backup resource.

Although approximately 5 per cent of the male population meet selected diagnostic criteria of alcohol dependence (major symptoms of withdrawal and impaired control over drinking), many people have 'drinking problems' without dependence.[54] Indeed, the prevalence of non-dependent alcohol abuse has been estimated at between 15 and 35 per cent of the male population.[55] This larger group would appear to be the logical target for secondary prevention. Problem drinking tends to be more prevalent among young males, where alcohol-related disorders such as traumatic injuries are often linked to acute episodes of intoxication. Elsewhere, we have reviewed psychosocial indicators of earlier manifestations of heavy drinking,[16] as well as considered various clinical and laboratory features[17] that are potentially more sensitive for detecting early stages of problem drinking. A practical recommendation is to assess patients with the indicators listed in Figure 2. The larger the number of abnormalities revealed by such an assessment, the higher the likelihood of alcohol abuse. Routine use of brief questionnaires, such as the MAST or CAGE,[42] is highly recommended especially in the light of their good diagnostic accuracy relative to laboratory tests.[36]

With individuals at earlier stages of problem drinking, the physician may consider recommending a reduction in alcohol consumption levels on a trial basis (moderation drinking strategy) as an alternative to total abstinence.[56] This approach should be more attractive to younger patients for whom the prospect of total abstinence may be perceived to be more adverse than the consequences from continued

alcohol misuse. Studies relating to the alcohol dependence syndrome[18] have provided evidence that controlled drinking goals may be considered with less dependent individuals, whereas abstinence goals are suitable for the more severely dependent.[19,57,58] A randomized trial of treatment versus brief advice[22] found at the two year follow-up that non-dependent alcohol abusers achieved better results from the one session of advice than from intensive inpatient/outpatient treatment.[57] The opposite was evident for physically dependent patients who achieved better results from intensive treatment than from brief advice. Thus, a careful assessment of the degree of alcohol dependence[18,19] may be crucial in deciding when a brief intervention may be appropriate, as well as for deciding when moderation of drinking may be recommended.

The counselling session should begin with detailed feedback concerning the patient's current health status, as well as the potential risks of future health problems if heavy drinking continues. When the patient is married, involvement of the spouse may be advantageous since social and family support may determine successful outcome. The presentation of evidence of physical damage caused by drinking (for example, raised GGT levels owing to abnormal liver functioning) provides a biofeedback mechanism which might be useful in motivating patients to alter their alcohol consumption. Then, the discussion could focus on defining a set of goals regarding problems identified during the assessment, and on developing strategies for meeting these goals. The use of self-help manuals[48,49] with problem drinkers has been found to be of value in assisting them to maintain the gains that they made during initial intervention. One study found relatively few differences in effectiveness between self help and therapist-administered versions of a behavioural treatment for problem drinkers.[59] Self-help manuals should thus be viewed as an important adjunct to the brief counselling session.

A final component of the basic strategy is the implementation of routine follow-up contacts. This follow-up is vital for monitoring and reinforcing success toward goal attainment, and for demonstrating the continuing concern of the physician in the patient's progress. One study[50] achieved good compliance by offering their patients half-hour consultations with the same physician every three months, and monthly appointments with the same nurse. Serum GGT levels were measured monthly and this biofeedback was given to patients along with a reminder to moderate their alcohol intake.

Psychosocial factors

Heavy drinking, often has more than six drinks per day (>80 g/d ethanol)
Concern about drinking by self or family or both
Intellectual impairment, especially of abstracting and adaptive abilities
Eating lightly or skipping meals when drinking
Drinks quickly: increased tolerance
Accidents in which drinking is involved
Tardiness or absence from work because of drinking (hangover)
Most friends are heavy drinkers; most leisure activities involve drinking
Attempts to cut down on drinking have had limited success
Frequent use of alcohol to deal with stress, anxiety, depression
Frequent drinking during the working day (for example, at lunch break)
Heavy smoker

Laboratory tests

GGT: elevated serum gamma-glutamyl transpeptidase (except in patients with nonalcoholic liver disease and those taking other drugs)
MCV: macrocytosis without anaemia, also sensitive to smoking habits
BAL: random blood alcohol level greater than 80 mg/dl

Clinical symptoms and signs

Trauma
Scars unrelated to surgery
Hand tremor
Alcohol fetor by day
Dyspepsia
Morning nausea and vomiting
Recurrent diarrhoea
Pancreatitis
Hepatomegaly
Polyuria
Impotence
Palpitations
Hypertension
Insomnia; nightmares

Figure 2. *Checklist of possible early indicators of alcohol abuse.*

Conclusion

The traditional approach to alcoholism that is adopted by many physicians may alleviate discomfort and arrest the progression of alcohol-related diseases. However, it is less likely to have an impact on the root of the drinking problem, which usually necessitates a change in lifestyle.[60] A model of care for alcoholism that deals primarily with the physical consequences of excessive drinking has achieved limited success in curtailing the prevalence of alcohol abuse. Physicians' efforts might be far better rewarded by systematic programmes for selective medical screening combined with brief counselling and follow-up. The cumulative impact of this approach should result in a greater number of cases undergoing a low-cost intervention at earlier stages of their drinking problems when prognosis is clearly more favourable. A concerted application of early intervention by the medical profession could be more effective than any forseeable political action in reducing the prevalence of alcohol abuse.

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Address for correspondence

Dr. Harvey A. Skinner, Addiction Research Foundation, 33 Russell Street, Toronto, Ontario, Canada M5S 2S1.

The Role of Pharmacotherapy in the Treatment of Alcoholism*

Marion C. McIntosh, MD, CCFP

Former Head of Ambulatory Medical Services and Family and Community Medicine at the Clinical Institute of the Addiction Research Foundation, Toronto.

SUMMARY. Drug therapy has a secondary function in the management of patients with alcoholism. The benzodiazepines are the drugs of choice for treating alcohol withdrawal, especially initially, in a high-dose loading technique. The alcohol-sensitizing drugs disulfiram and calcium carbimide may help your patients to maintain abstinence, but full medical assessment of the patient and knowledge of the adverse effects of these drugs is required prior to their use. The management of the disulfiram ethanol reaction is described.

Pharmacotherapy has a significant but secondary function in the therapy of alcohol abuse. Therapy for alcohol abuse varies widely. Early-stage problem drinkers[1] may benefit from a brief treatment intervention by their family physician. Alcohol-dependent individuals may be helped by Alcoholics Anonymous, group therapy, marital or family therapy, or individual psychotherapy.

In the treatment of alcoholism drugs may be used in three different ways:

- to treat conditions associated with alcohol withdrawal;
- to help decrease alcohol consumption and maintain initial abstinence;
- to treat underlying and pre-existing anxiety disorders and depression.

This article will deal with drugs belonging to the first two categories.

One of the major criteria established by the World Health Organization (WHO) for the diagnosis of alcoholism[2] is the presence of physical dependence on ethanol as expressed in an abstinence syndrome when ethanol is withdrawn. The alcohol-withdrawal syndrome is relieved by resumption of drinking, and thus one of the barriers to initial abstinence from ethanol is fear of withdrawal symptoms.

Most persons who stop drinking ethanol do not require pharmacotherapy to treat withdrawal.[3] This observation is the basis of the non-medical alcohol detoxification units which have been set up in some provinces.

A person who is withdrawing from ethanol after a prolonged period of drinking should do so under supervision so that he can seek

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treatment if required. The mild alcohol-withdrawal syndrome requires very little treatment: a comfortable supportive environment, reassurance, nourishment during the approximately 48-hour period of the syndrome's duration are all that is needed. Thiamine 50mg or 100mg p.o. may help to prevent 6th-nerve palsy if food has not been eaten regularly. This mild alcohol withdrawal syndrome consists of tremours, irritability, and insomnia. It appears within a few hours after the last drink and usually disappears within 48 hrs.

Many patients with moderate to severe alcohol withdrawal syndrome will have to be hospitalized. These patients have severe tremours, are diaphoretic, have tachycardia greater than 110, and fever higher than 38C°; they may be extremely agitated, have hallucinations, suffer from nausea and vomiting, and if untreated, may progress to delirium tremens. These patients should have vital signs checked regularly; if there is evidence of arrhythmia, a cardiac monitor should be in place. Attention should be paid to fluid and electrolyte imbalance; blood and urine should be screened for drugs and alcohol if these tests are available.

Many drugs have been used to treat alcohol withdrawal. The benzodiazepines have now replaced other drugs that have formerly been used to treat this syndrome. The most useful drug for the patient who does not have obvious severe liver disease is diazepam. The patient is given three doses of 20mg p.o. at one- to two-hour intervals, but should be re-evaluated before each dose. Two or three more doses may be given if the patient has not settled. The patient will continue to have a smooth withdrawal long after the medication is administered. The patient with severe liver disease should be given a shorter-acting medication at a lower dose (e.g., Oxazepam 15-30mg t.i.d. or Lorazepam 1-2mg t.i.d.).

Alcohol withdrawal seizures have traditionally been treated by loading the patient with 10mg/kg of Phenytoin and then continuing Phenytoin 300mg daily for five days. Diazepam has anti-seizure properties, and when it is used in a loading regime of 20mg for three doses to treat alcohol-withdrawal syndrome, the patient will not require Phenytoin unless he has previously been diagnosed as having idiopathic epilepsy.

Hallucinosis may have to be controlled during alcohol-withdrawal syndrome. The phenothiazines and butyrophenones have anti-hallucinatory properties effective in alcohol-withdrawal hallucinosis, but they tend to lower the patient's seizure threshold. The butyrophenones (haloperidol) have less sedation and cause less hypotension and thus would be the safest drug to use, particularly once the risk of seizures has passed, after 2-3 days. The dose of haloperidol would be 2-5mg p.o. or IM q. 1-2 hours, to a maximum of five doses.

The progression of treatment for a patient with an alcohol problem following detoxification is an alcohol rehabilitation program. Most alcohol-treatment programs in Canada and the United States have an abstinence goal, and thus drugs which help to maintain abstinence

may be useful in the treatment of participants; in fact, until recently, disulfiram was a requirement for patients participating in many programs.

In Canada two alcohol-sensitizing drugs, disulfiram and calcium carbimide, are available to help maintain abstinence. A number of other drugs produce a similar but milder reaction, but they are used primarily for other indications. These drugs include chlorpropamide, tolbutamide, acetohexamide, metronidazole, and moxalactan.

Disulfiram was first used in humans in 1948 by Hald and Jacobsen when they noted an unpleasant reaction to ethanol after taking disulfiram. It became widely used in alcohol-treatment facilities, where patients were often given a test dose of ethanol to demonstrate the disulfiram ethanol reaction (DER). This practice has been discontinued because of the potential fatal outcome of DER.

Disulfiram is a non-specific enzyme inhibitor. The DER is related to its inhibition of aldehyde dehydrogenase, with resultant increased levels of acetaldehyde in the body. The DER can begin within 5-15 minutes of ingesting small amounts of ethanol; this is often followed by skin flushing, which begins on the head and neck and progresses to the trunk; other signs and symptoms include headache, blurred vision, nausea, vomiting, diaphoresis, palpitations, hyperventilation, dyspnoea, chest pain, and hypotension even to cardiovascular collapse and death. The symptoms of DER usually peak within 20-30 minutes and subside within two hours. The inhibition of the aldehyde dehydrogenase appears to be permanent, and thus the DER may take place up to two weeks after the last disulfiram ingestion until resynthesis of the enzyme takes place.

There are at least two reasons why a patient should have a full medical assessment prior to the institution of an alcohol-sensitizing drug:

- to detect illnesses which may be a contraindication to the use of these drugs;
- to document pre-existing findings, since many of the side-effects of disulfiram are also medical consequences of alcohol use (e.g., impotence, liver disease, skin rashes and peripheral neuropathy).

This assessment should include ECG, CBC, blood-glucose and liver-function tests, renal function tests, and thyroid tests (the last if calcium carbimide is considered). The main contraindications to the use of disulfiram include:

- heart disease: i.e., myocardial infarction, angina, arrhythmias and cardiomyopathy;
- advanced liver disease: i.e., cirrhosis with or without ascites or encephalopathy, severe active hepatitis;
- endocrine disorders: i.e., diabetes mellitus and thyroid dysfunction;
- psychiatric disorders: i.e., major affective disorders, schizophrenia or personality disorders where loss of impulse control may leave the patient at risk to suicide;
- pregnancy, especially during the first trimester.

The recommended dose of disulfiram is 250mg daily. A higher dose is not warranted, although a loading dose of 500mg is suggested in many treatment programs. The higher dose will increase the likelihood of adverse reaction to the drug.

Disulfiram inhibits other enzymes in addition to aldehyde dehydrogenase and the following two enzymes may be clinically significant:[4]

- dopamine beta hydroxylase, which is involved in the degradation of dopamine and the synthesis of norepinephrine; thus care in using antidepressants should be exercised. The inhibition of this enzyme may also explain the contraindication to disulfiram for patients with depression and schizophrenia.
- Drug-metabolizing enzymes of the microsomal system, which may interfere with the degradation of drugs such as benzodiazepines, warfarin, phenytoin, isoniazid and rifampin. The use of these drugs will not necessarily be a contraindication to disulfiram, but careful monitoring of the drug levels and clinical condition of the patient is necessary.

A request for the use of an alcohol-sensitizing drug may come from the patient's family, employer, or social worker. A very significant contraindication for the use of disulfiram in any patient is the patient's confidential statement to you that he does not wish to take this medication. Disulfiram is a potentially toxic drug, and you must receive the patient's full and informed consent before you may prescribe it.

The most common adverse effects of disulfiram that patients describe are skin rashes, drowsiness, a metallic taste, a garlic-like odour, impotence, headache, and blurred vision. Polyneuropathy, hypersensitivity hepatitis, psychosis, delirium, and seizures have also been described. Transient Parkinsonian symptoms, optic neuritis, and increased serum cholesterol may occur with long-term treatment.

Calcium carbimide is also available in Canada as an alcohol-sensitizing drug. It was introduced in 1956 by Ferguson, who studied alcohol-deterrent drugs looking for a less toxic alternative to disulfiram. Calcium carbimide is dispensed in a citrated form in a slow-release tablet, but it is still rapidly absorbed. It has its maximum effect in one to two hours and wears off in 12-24 hours. The dose of calcium carbimide is 50mg twice daily. It also achieves its alcohol-deterrent effect by inhibiting aldehyde dehydrogenase, but the inhibition is more readily reversible. The calcium carbimide ethanol reaction (CER) is similar to the DER but milder, and the only death associated with a CER occurred where twice the therapeutic dose of calcium carbimide was used in an ethanol-test reaction. Calcium carbimide has been noted as having significant anti-thyroid activity in laboratory animals, but this effect has not been described in humans.

Calcium carbimide is often used in situations where disulfiram is contraindicated (e.g., liver disease, psychiatric disease) because of its fewer reported side-effects and lack of involvement in inhibition of other enzymes. The short duration of action and rapid onset makes this drug seem ideal for helping patients over high-risk situations if they are not interested in taking a drug on a long term basis.

The emergency-room physician may be involved in the treatment of the DER or CER reactions as described earlier. The main treatment is supportive care, although supplemental oxygen and cardiac monitoring are recommended for all patients.[5] Hypotension responds well to IV fluids, which are often required in large volumes. If vasopressors are required, norepinephrine (levophed) is the drug of choice, since disulfiram causes norepinephrine depletion. Oral or IV potassium may be required to treat the hypokalemic patient. The DER/CER is not histamine driven, and the use of anti-histamines is not indicated.

Conclusion

In sum, pharmacotherapy has an important function in the treatment of alcoholism, but only as part of an overall strategy for the patient's alcohol rehabilitation. There is no place for the chronic use of benzodiazepines or other hypnosedatives in the treatment of alcoholism itself. The resulting cross-addiction only adds to the patient's problems.

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Treating Alcoholics and Their Spouses: A Family-Systems Centred Approach*

Rick Lebell

Psychologist, Regina Rehabilitation Centre

SUMMARY. The need and rationale for an expanded focus in the treatment of alcoholism are outlined in this paper. The inadequacy of a treatment regime which treats alcoholics in isolation from their families is demonstrated. The author describes the Couples Treatment Program in Regina, which illustrates a new and innovative approach to dealing with underlying issues related to drinking behaviour. This approach recognizes that marital and family issues and perpetuation of drinking are highly interrelated. Recovery involves addressing not only the drinking problem, but also relationship issues that reinforce drinking. The role of the spouse of the alcoholic in treatment and the need for treatment of the entire nuclear family are also mentioned.

Alcoholism treatment has traditionally focused on isolating the alcoholic from the family, rather than including the family in treatment. This philosophy of treatment is no longer adequate, as it fails to address problems outside those caused by drinking. Despite the fact that there is growing evidence to support a family-oriented model of treatment, alcoholism programs, by and large, still treat the alcoholic apart from the family.

Usually by the time alcoholics are referred to treatment or rehabilitation, their drinking has affected not only themselves, but those close to them, especially the family. If a rehabilitation program focuses only on the alcoholic, the non-alcoholic spouse or family member may be ignored, actively shunned, or covertly avoided.[1] If alcoholics are to stop drinking and maintain sobriety, they will have to change, and so will those around them.

It is not always possible to implement a treatment strategy that includes the family members. In many cases alcoholism has severed family ties, and there is no longer a family to work with. Often the spouse is uninterested or unwilling to receive help, and therefore it is not possible to work with more than one member of the family.

One of the most frequent questions posed by those unfamiliar with a family-oriented approach to rehabilitation is, "Why do you need to provide services to the spouse or family member when only one is the drinker?" When alcohol is removed from the family, everyone in the family is left feeling highly vulnerable. The alcoholic and the rest of the family are exposed to personal feelings of inadequacy which were previously concealed by the drinking. In order to reduce this

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sense of vulnerability, or threat, the family often attempts to return to the previously established status quo. In a clinical setting, this is sometimes heard in the alcoholic's statement, "We have no marital or family problems now that I am sober." This attempt to focus totally on the drinking and thus avoid the relationship issues serves as a manoeuvre to revert to the previous way of functioning. Another example is a spouse's statement, "Ralph is the one who has the problem. Just get him sobered up and we'll all be fine." Again, the resistance to change is evident in the spouse's attempt to shift the focus to the alcoholic and his drinking as the sole problem in the family.

It has been pointed out that when alcohol is removed from the family system, critical relationship issues come into focus. The family begins to realize that many of the intolerable situations that were not faced previously because of the drinking must now be faced and dealt with. Because the alcoholic is now sober, the family must begin to accept that it can no longer blame family problems on alcoholic stupor.[2]

A more recent source has reported that successful recovery from alcoholism requires an approach that addresses the treatment needs of the entire alcoholic support system. The authors state that because traditional alcoholism-treatment programs are set up primarily to focus on the primary symptom, the drinking, these programs are frequently sabotaged by family members who remain trapped in their destructive behaviour patterns.[3]

Another source states that the potential for change is greatly enhanced when intimates are involved in treatment, and when the relationship system rather than the symptom is the focus of attention. While the presenting problem provides the motivation for treatment, as well as a content focus, it is the relationship system which supports the symptom that commands attention.[4]

Role of the non-alcoholic spouse in treatment

In a family oriented approach to alcoholism treatment, the presenting problem is reframed and recognized as an ongoing component of family functioning. This approach shifts the focus from the individual to the family and often engenders resistance on the part of the alcoholic spouse. It sometimes takes months for the spouse of the alcoholic to accept responsibility for participating in treatment.[2]

The non-alcoholic spouse often does not recognize the role he or she plays in perpetuating drinking in the family. This phenomenon is so common in alcoholic families that the non-alcoholic spouse is sometimes referred to as "helper",[5] or "provoker",[6] in situations where manipulation, ambiguous statements, covert acts, controlling tendencies and acts of denial serve to reinforce the alcoholic's drinking or encourage a resumption of drinking after a period of abstinence.[1]

Short-term rescue measures such as paying overdue bills, making excuses to the employer, and monitoring the alcoholic's alcohol intake have been called "enabling" actions.[7] The spouse often engages in

these behaviours in the hope that the alcoholic will stop drinking and recover spontaneously. It has been reported that family members act out a set of ritualistic enabling behaviours which become so entrenched that the family members practising them are sometimes viewed as more disturbed than the alcoholic.[3]

The non-alcoholic spouse is thus seen from a treatment perspective as an affected or disturbed family member or co-alcoholic[8] suffering from untreated alcoholism. Although the primary purpose of family alcoholism treatment is to promote continued abstinence through arresting the alcoholic's drinking behaviour, this objective is accomplished through personal growth and behaviour change on the part of the alcoholic, as well as family members.[3]

From a somewhat different perspective, the non-alcoholic spouse may also provide, where indicated, a necessary source of information in helping confront the alcoholic's denial. No one is likely to be more familiar with the alcoholic's drinking and behaviour patterns than the spouse of an alcoholic.

The Couples Treatment Program

Generally, it is a crisis that brings a couple into treatment; once they are involved in treatment, other crises occur which need to be dealt with in different ways. The couple may revert to the old patterns if the perceived threat is great enough, and they may decide to leave treatment. On the other hand, the couple may remain in treatment, yet each focus entirely on the other spouse as the source of the problem and benefit little from the treatment. Alternatively, the couple may come to realize that the termination of drinking represents only an initial part of recovery and may acknowledge the importance of confronting one's personal and relationship fears and uncertainties if treatment is to be effective. It is in making this adaptive response to crisis that couples gain most significantly from the Couples Treatment Program.

The Couples Treatment Program admits the husband and wife pair into an intensive, three-week, inpatient residency program in Regina, Saskatchewan. It operates within the general structure of the Alcoholism Rehabilitation Program, and couples comprise approximately half of the treatment population. The remaining half is made up of non-alcoholic spouses and alcoholics who have entered treatment alone.

Typically, the couple enters treatment with husband as alcoholic and wife as non-alcoholic spouse; occasionally this norm is reversed, and sometimes both partners enter as alcoholics. Much of rehabilitation consists of providing basic information about alcoholism as it affects the drinker, as well as the non-alcoholic spouse. The couples receive the same information (lectures, films, etc.) as those who enter treatment alone (non-alcoholic spouses or alcoholics whose spouses are not present). The major thrust of rehabilitation, however, centres around group therapy. Group therapy involving couples is referred to

as "multi-couples group therapy." The couples are involved in daily group-therapy sessions: about four or five couples comprise a group. Much learning and growth also occurs outside the formal aspects of treatment in discussion sessions and informal talks in the residence after hours.

Prior to entry, or shortly thereafter, most couples who enter treatment in Regina have acknowledged or accepted abstinence as a treatment goal or priority. This experience, however, sometimes contributes to the belief that everything will be fine from now on, and often couples become frustrated and resentful when their relationship does not suddenly improve. Since only the symptom has been identified, many relationship issues remain to be addressed. In viewing alcoholism from a family-treatment perspective, it is important not only to acknowledge initial sobriety and its maintenance, but also to recognize explicitly the ways in which the drinking behaviour has become integrated into the family's method of functioning.

The thrust of multi-couples group therapy evolves around the following interactional issues, the first four of which have been pointed out by Glass:[1]

- All couples have problems, but alcohol prevents resolution of these problems and creates new and more complex ones.
- No individual can force another to change.
- Personal change comes through accepting responsibility for one's own behaviour.
- Both members of the couple are involved in the problem, and both are equally responsible for its resolution.
- Removal of alcohol from the family system represents a necessary beginning in the recovery process, yet is incomplete in itself.

As an integral part of the Couples Treatment Program, multi-couples group therapy creates an excellent vehicle for observation of individual dynamics, couples dynamics and, also, the dynamics of the total group. Furthermore, this type of therapy not only allows for enhanced sharing and mutual learning, but also creates an opportunity to initiate changes in the marital relationship where both members of the couple participate, and where support is available from other group members.

Further expanding the focus of treatment

A more comprehensive strategy that expands on the rationale of the Couples Treatment Program would include the involvement of the nuclear family in inpatient treatment. It has been demonstrated that the non-alcoholic spouse is adversely affected by the alcoholic's drinking, and it is now becoming increasingly clear that the children in families where one or both parents are alcoholic also suffer from emotional and behavioural problems caused by parental alcoholism. Children of alcoholics often blame themselves for problems in the family and carry much unexpressed guilt. They often perceive themselves as different from other children. It has been reported that the children of alcoholics are especially at risk for developing alcoholism

or other chemical dependencies.[3] Furthermore, adult children of alcoholics often adopt a super-responsible or super-irresponsible attitude toward life. They also demonstrate much confusion in distinguishing between normal and abnormal behaviour.[7] Because of the long-term effects of alcoholism on family members, a new clinical population of adults has recently emerged. A corresponding self-help group called Adult Children of Alcoholics (ACOA) offers support and understanding to adults still suffering from earlier effects of alcoholism in the parental home.

Incorporating the entire nuclear family in treatment allows each family member to assess better how he or she has been affected and the role each plays in system maintenance. This approach also offers each family member an opportunity to engage her/himself both as an individual and as part of a family unit in establishing new and adaptive methods of interacting. Although such an approach to treatment is likely to be more expensive to implement than the traditional approach, in the long term it would be cost effective, as early intervention is believed to prevent further deterioration of the entire family system.

Conclusions

This paper outlines the need for an expanded focus in the treatment of alcoholism. It points out that a family-system orientation provides a comprehensive and meaningful approach to addressing underlying issues related to problem drinking. In essence, this approach is not one of choosing between dealing with alcohol abuse or dealing with the marital or family system. Rather, it is an integrated approach which views alcohol abuse and family functioning as interrelated.

The Couples Treatment Program is a new and innovative approach to inpatient treatment of alcoholism. It offers better observation of family dynamics at work and indicates ways in which unhealthy behaviour patterns become integrated into family functioning. In the Couples Treatment Program, marital and family dynamics are viewed as effective leverage points for treating alcoholism once the alcohol has been removed from the system. Perhaps some day this approach will be further expanded to include the entire nuclear family.

This shift in focus represents a methodological alternative to treating alcoholics in isolation from their families. The diversity and breadth of this approach also expands a person's perception of the meaning of behaviour and the context in which it occurs.

The development of a family-oriented approach to alcoholism awaits demonstrated validity and reliability, yet the implementation of such an approach is vital in the present.

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A Difficult Business: detecting and managing alcohol problems in general practice*

Betsy Thom & Carlos Téllez

Institute of Psychiatry,
Addiction Research Unit,
London, U.K.

SUMMARY. The appeal to general practitioners in the U.K. to take a more active role in the detection and management of alcohol problems has fallen largely on deaf ears. Yet the reasons general practitioners give for their reluctance to become more deeply involved in this area are often dismissed as mere 'rationalizations'. This paper reports general practitioners' perceptions of their experiences of diagnosing alcohol problems; their difficulties in offering the diagnosis to patients and the strategies they employ in attempting to do so; their attempts to offer help within general practice and their use of hospital services. The data are drawn from 33 interviews with general practitioners using an 'open discussion' technique. Some suggestions are made on ways of supporting the medical response to alcohol problems but it is argued that, in the long run, medical intervention is influenced by extraneous political and social factors and that changes are needed in public opinion about the use of alcohol.

Introduction

In 1978, the U.K.'s Department of Health and Social Security's Advisory Committee on Alcoholism stated:

> "Members of the primary care team have considerable opportunity to identify problem drinkers. The aim must be that not only shall they do this but they shall also provide treatment and care."[1]

Despite such encouragement and considerable advice on how to improve their response to detecting and managing drinking problems,[2-5] the majority of general practitioners have shown little enthusiasm for the task.[2,6,7,8]

It has often been assumed that the failure of general practitioners to enter whole heartedly into involvement with these problems is evidence simply of ignorance, prejudice or wrong thinking. More often than not, however, discussion is based on the open or latent assumption that the general practitioner's active involvement with this type of patient is 'a good thing'. With a few notable exceptions,[7,8] little attempt has been made to seek general practitioners' views of their role in responding to alcohol problems or to take seriously their views on the difficulties they experience in attempting to do so. We believed

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that it was important to get beyond stereotyped explanations and pay attention to what doctors themselves had to say. The research strategy which we employed very purposely sought to allow a sample of general practitioners to comment freely on the topic without proposing what was 'right' or 'wrong'. It was an attempt to let general practitioners talk about their experiences in their own terms, with the doctors themselves defining what, if anything, were the problems. Our primary aim was that of description, with the hope that, from listening to a series of individual responses we could identify a general set of parameters affecting doctor-patient interaction in this field. Only when that picture has been sketched out can we go on to consider what could be done to strengthen the involvement of general practitioners in this type of work.

Methods and sample

Between March and September 1984, 33 general practitioners were interviewed. Twenty-one of these were randomly selected from the lists compiled by the Family Practitioner Committee for two health authority districts in South-East London; nine were doctors who referred patients to the Maudsley Alcohol Clinic during the study period and three were doctors interviewed in the pilot stage of the enquiry. Seven further general practitioners were contacted but were unable to co operate. Doctors were contacted first of all by a short, explanatory letter requesting their co-operation. This was followed by a phone call from one or other of the authors to request an interview.

Of the 33 doctors, 5 were women; 4 doctors were under 40 years old; 9 were aged 40-49; 12 were aged 50-59 and 8 were 60 years or over. Only 5 doctors had less than 10 years experience in general practice. Ten doctors worked in single-handed practices.

An interview schedule consisting of mainly open ended questions was used to explore the following topics: (i) attitudes towards the role of the general practitioner and the place of medical intervention in detecting and managing alcohol problems; (ii) perceptions of the difficulties experienced in attempting to detect and manage drinking problems; (iii) perceptions of the extent and nature of the care offered to patients within the doctor's own practice; (iv) the use of and perceptions of hospital services and other specialist services (e.g. Alcoholics Anonymous). Interviews lasted between 30 min and 1 h and in most cases were tape recorded and then transcribed.

Although in the course of the paper we provide some simple 'counts', our analysis is essentially a qualitative one.

Results

Detection of alcohol problems: difficulties in asking about drinking

On the whole, the general practitioners we spoke to did not make specific efforts to identify drinking problems in the early stages. New patients were not usually asked about alcohol consumption as part

of the initial history taking (only 5 of the 33 doctors said they did this) and most doctors thought that in diagnosing patients' complaints their 'index of suspicion' was not as high as it might be. Even when a drink problem was suspected, over half the doctors found it difficult to broach the subject directly with their patients. As a result, drinking problems usually did not come to light until there was a crisis or a breakdown in the patient's health or social circumstances.

Some doctors felt that, for one reason or another, they, personally, were not very good at picking out drink problems in the early stages. Most doctors said that their education and training had not prepared them for the job. Few remembered receiving any alcohol-specific education in their undergraduate courses; one remembered 'a session' on alcohol; one remembered covering 'the complications of alcohol'; and one doctor, trained abroad, remembered that her course had included 'quite a lot' about alcohol. Similarly very few had attended postgraduate meetings, seminars or courses and only one doctor recalled attending a training course (½ day per week for 8 weeks).

But to a large extent, the real barriers to the early diagnosis of drinking problems were seen to arise firstly from the difficulties doctors themselves experienced in arriving at a diagnosis of 'alcohol problems' and secondly from the difficulties they experienced in offering the diagnosis to patients.

These two aspects of the diagnostic process have been aptly linked by one author who commented that "making a diagnosis is not merely an *intellectual* exercise, but it also has *emotional connotations* for both patient and doctor."[9]

Reaching a diagnosis: difficulties in definition

The variability of individuals' responses to drinking and the fact that, even with recommended guidelines, there were 'no hard and fast rules' made it difficult for doctors to decide exactly when alcohol consumption became a problem. One doctor told us that he found it very difficult "to draw the line between the high alcohol consumer and the alcoholic" because "some people seem to function quite satisfactorily on a very high alcohol intake and others don't on a much lower one." Although some doctors drew a distinction between drinking problems and alcoholism, most talked solely in terms of the latter and the notion of 'drinking problems' seemed ill defined to general practitioners. Asked to estimate how many patients with drinking problems he had on his list, one general practitioner replied:

> "I don't know how you would define drinking problems. I mean a problem to me, a problem to them, or a certain quantity of drink or that they can't stop?"

Furthermore, in the absence of clear evidence of alcohol-related harm, at what point could the doctor legitimately intervene in what was, essentially, a normal everyday activity and part of the patient's 'private life'?

"It is impossible," said one doctor, "to draw the line between what is social and what is medical because beyond a certain quantity of alcohol it suddenly develops into a health problem and below that it is social and so it is impertinent of us—in a way—to be asking questions about how much alcohol is taken when it might be simply a very small amount which is insignificant medically. So it is a sort of touchy subject, I think. And if it were clearer what quantity was the limit—you know, the quantity above which it was clearly a medical problem, then it might perhaps be a bit easier for us."

Thus the boundaries between social drinking, problem drinking and alcoholism were unclear and until there was some evidence of harm related to drinking, alcohol consumption was not the doctor's business.

Reaching a diagnosis: difficulty in believing it is worthwhile

Apart from these uncertainties, there were emotional barriers which blocked the doctor's readiness to reach a diagnosis of 'drinking problem'. Foremost among these were general practitioners' expectations that attempts to help patients with drinking problems were more than likely doomed to failure.

Half the doctors, 17, felt that the chances of helping patients with their drinking problems were 'poor' or 'very slim'. Of the remaining, only one felt confident that the general practitioner could do something to help while the others thought there was 'some chance' of helping if the circumstances were right. Fifteen doctors could not think of anyone who had stopped drinking or modified their drinking habits in any way in the previous 12 months as a result of their interventions.

It is possible that pessimism about the outcome of treatment was related in part to doctors' perceptions of the aims of treatment. There were a few doctors who spoke of 'success' in terms of patients 'who have definitely cut down', or of trying to 'contain rather than cure' patients, and for one doctor, flexibility of aim was important:

"Goals are really moveable objects," he said, "they can go up or down and you try to relate them to the patient's needs and the patient's capacity to benefit from them and to the patient's desires."

This same doctor likened drinking problems to a chronic condition:

"I don't know how you determine cure—what does cure mean? Cure means that we'll never ever drink again for the rest of our lives or we treat it in a sort of social way and never go off the rails again. But I don't think I have ever—oh yes, I had one man who went off booze completely and as far as I know he is still off booze and he hasn't had any drinks now for about 10 years, but that is the only one I can think of. The rest of them you know, their frequency and their breakdowns get diminished and they have a binge once or twice a year. I'm only happy that they are once or twice a year and not every other week, you know. There again, if you have got a man with congestive cardiac failure and treat him with drugs and he breaks down and you have to introduce different

tablets it's partially the same thing. You haven't really cured him you have alleviated the symptoms with various drugs and so forth. I suppose you might be successful with an alcoholic in the same sort of way."

But for many of the doctors we spoke to 'success' in treating drinking problems seemed to equate with the notion of 'cure', stopping drinking altogether. One doctor, for example, commented as follows:

"I don't know that there's any way that you can treat an alcoholic . . . The average alcoholic you can dry out, comes out and starts again. In my experience, I have got about three patients who in fact have stopped drinking . . . but the average comes in, goes out, comes in, goes out."

Another indicated how his pessimism about the outcome of treatment affected him:

"My management of alcoholics, I think, is coloured by my very strong belief that it is very rarely that one finds a cure for it and I think I can only help an alcoholic if he desperately wants to be helped . . . I always think that alcoholism is about as curable as cancer—you can cure some cases but not many."

Adding to the gloom was the belief that factors important in achieving success usually lay outside the control of the general practitioner. Two doctors mentioned spiritual help and awareness as important; three said it was the threat to the patient's life; seven felt that a supportive environment, in particular support from the family, was the crucial element; seven felt that some form of group therapy, notably through AA, often proved effective, and, most importantly, 18 said that success lay with the patient, coming from strength of character, fear of destroying the family or, most often, being prepared to face the problem and being motivated to change drinking behaviour. Of the doctors who had had 'a success' in the previous 12 months, only five mentioned their own intervention or support as contributing in any way to the success.

Success stories usually indicated a combination of many factors compelling patients to change their drinking behaviour with sometimes a seemingly trivial 'trigger' sparking off the change. In one instance, we were told:

"It is the most trivial thing that seems silly to you and I that is liable to shake them into an awareness of their situation. I had one that told me she stopped drinking because her granddaughter came to see her and sat on her knee and said, 'Granny, you smell funny just like daddy'. That was very nasty so she gave up then. She stopped drinking because of that. So I think any silly little factor could do it."

Even in the face of its apparent effectiveness, doctors tended to see medical intervention as making only a modest contribution to success. The following story was related by a general practitioner who considered it to be 'a bit weird':

"I don't actually understand it because, in brief, [he] came to see me and I told him bluntly what he was doing and where he was at and I said, 'I expect you to stop' and so on and so forth, not expecting anything at all. A month later he came back to me and said he hadn't had another drop and I know the man well now and I follow him up and he hasn't drunk from that day forth."

The interviewer asked if it had taken only the one confrontation and the doctor replied:

"The one confrontation is all it took. Isn't it extraordinary . . . I mean I would imagine that he was going to stop, was likely to have stopped anyway. I think he must have been about to come to his senses."

While most doctors saw themselves as having little part to play in achieving success, patient motivation featured prominently in all our discussions as the most important factor in effecting change in patients' drinking habits. Of course, it could not be assumed that patients necessarily wanted to be cured:

"They want to be able to drink as much as they like and feel good the next morning and not lose their jobs or have their relatives complain. That is why you can't really call it a disease. They are happy when they are boozed . . ." was one comment.

But cure, if not 'all a matter of willpower' as one doctor believed, certainly required 'the will' as a necessary ingredient for change. More often than not, however, doctors felt that patients wished for the impossible—'a miracle' or 'magic' as the following extract illustrates:

Interviewer: "What do you think patients expect or hope for from the services?
Doctor: Usually they want to be cured if it is ever possible. Without anything having happened.

Interviewer: Like magic?
Doctor: That's right. They expect magic and their relatives expect more magic from you. They just simply cannot believe that I can't transport anybody who is drinking too much to the right cure. They can't believe it, no matter how much you tell them. But the patient is the one who has got to refer themselves, who has got to be willing to try, who has got to be motivated."

To a large extent, then, it would seem that doctors saw themselves as offering intervention which the patient often did not want and a form of treatment which, at best, would make only a minor contribution to change in the patient's behaviour.

That the pessimism felt by the doctors we interviewed influenced their readiness to diagnose patients' symptoms as alcohol problems is illustrated in the remarks made by one general practitioner who said:

"One of the things I don't do is ask too many questions because I don't want to uncover a whole lot of things I can't deal with. So

my technique sounds awful, but it is to wait until something comes to my attention generally. I am not going hunting out problems I don't know how to treat. I could spend hours and hours every day trying to deal with it. Now if it were obvious how I could deal with it effectively, then I might go looking for a few patients."

There were therefore, intellectual difficulties and emotional barriers to be overcome before doctors themselves could arrive at a diagnosis of 'drinking problem'. The next step was to broach the question of alcohol consumption with the patient. Since patients rarely asked directly for help with drinking problems, knowing or suspecting that there was a drink problem presented new dilemmas to the doctor—whether or not to confront the patient with the diagnosis and if so, when and how?

A delicate diagnosis: difficulties in confronting the patient

General practitioners in the study frequently pointed out that patients' denial of drink problems or unwillingness to change drinking behaviour was a common reaction to the suggestion that they might be drinking too much. This reaction, doctors felt, was understandable in a culture which stressed the normality and desirability of drinking and, in some environments, of heavy drinking. While patterns of drinking were seen to differ subculturally, inducement to drink was seen to transcend distinctions of class, age and increasingly, of sex. One doctor for example told us:

"I tell pregnant women to be very circumspect about it and to stop if they can but I think in this middle class practice that is really quite difficult to do . . . you can imagine the pressures on this bunch of middle class people."

Similarly, a doctor in a working class area told us:

"This is a traditionally heavy drinking area. It's a dockland community, it's a very stable community, but there is a tradition of reasonably heavy drinking."

More often than not, then, patients' conceptions of normal drinking and problem drinking were at variance with specialist guidelines and with doctors' definitions making it difficult to 'get through' to patients especially at an early stage in their drinking. As one doctor explained, in an area where beer drinking is traditional, 8 pints is considered normal:

"Medically it is not normal but for that area that is normal, so if I tell them 8 pints is too much, then most are likely to laugh at me and say, 'We've been doing it all our lives doctor.'"

Another problem was the stigma which attaches to those who are seen to abuse alcohol. Aware of this, many doctors were reluctant to bring up the topic with their patients and several stressed the need to do so without appearing to judge the patient or to moralize. They believed, too, that patients were reluctant to mention drinking for fear of what the doctor might think and 13 doctors felt that this applied particularly to women.

Offering a diagnosis of 'alcoholism' or 'drinking problem' was, therefore, a delicate affair. In the words of one doctor, if you suspected a drink problem, "you'd ask very delicately not like a bulldozer." To offer an untimely diagnosis of 'alcoholism' or 'drink problem' was to risk arousing an aggressive denial from the patient, being told to 'sod off'. It could end the relationship with patients consulting another doctor in future. As one general practitioner told us:

> "I have had patients who have changed doctors. They have gone off our list because we have insisted that they did have a drinking problem."

Even when rejection was not so final the future management of the problem could be adversely affected by an ill-timed approach. The following extract illustrates the point:

> *Interviewer:* "If you suspect that a patient has a drink problem, do you take any action or not?
> *Doctor:* The situation is such that I don't directly ask them, because the relationship at the particular time of consultation is based on something entirely different, and to create an antagonism between myself and the patient or to raise any sort of barrier between us would probably not contribute to any help which the patient may need for his or her problem with alcohol. It may also tend to keep the patient away in future, for other particular pathological reasons when they should actually be in surgery. If I do ask I try to conceal it or camouflage it on the rare occasions when I do. If I don't do that I'll get the same sort of answer, 'Oh no, it isn't drinking', and that's that. So therefore I close the door which I must leave open."

Given the diffidence many doctors felt about confronting patients with their drinking, it is not surprising that their comments revealed a variety of strategies for avoiding a direct approach to the problem.

Seven doctors were prepared to face the alcohol problem only if it were brought to their attention by the patient or emerged openly in the course of consultations.

A further 13 doctors attempted to expose suspected drink problems but tried to do so without directly confronting patients with their suspicions. They tried to find an appropriate 'hook' on which to hang questions or suggestions about alcohol consumption.

Some of these doctors, for example, asked the patient in a roundabout way about their drinking but withdrew if they met denial and did not press the matter. "If he's denying it you can't confront the patient with it," said one doctor, "you can lead him round to it." Another remarked that:

> "It's the sort of thing you might ask your best friend about, but you certainly must be careful not to ask direct questions of that sort of a patient. I would often like to ask the question but I don't. Or if I do, I try to conceal it or camouflage it."

Another strategy was to ask the patient about alcohol consumption if presented with symptoms which might be alcohol related or if the

occasion seemed appropriate. Discussing two patients he had seen the previous month, one general practitioner commented:

> "I have a high suspicion that they may be taking more alcohol than is good for them but since they haven't come to see me for any condition which was related in any way to alcohol intake, I didn't actually bring up the matter."

Questions which were not 'directly related to the disease', these doctors felt, would be an intrusion on patients' privacy.

Yet another strategy adopted by these 13 doctors was to look for 'proof' of alcohol abuse, often by way of tests. This provided an appropriate opening to the confrontation and could possibly frighten the patient into accepting the diagnosis.

Referral served a similar purpose. Test results, or simply the hospital experience might jolt the patient into admitting to a drink problem. The hospital could be used as a greater 'authority' and someone else might break the ice by confronting the patient with the drinking problem.

The remaining 13 general practitioners said that when they suspected a drink problem they asked patients straight out about their alcohol consumption. Some of these doctors felt that patients expected to be asked such questions and would not regard it as an invasion of their privacy. It was part of the doctor's preventive role. One doctor commented that there was "no mileage to be gained by doing it surreptitiously" because he would get nowhere with the management of the problem. Another doctor felt that:

> "In the immediate sense, telling patients the real nature of their problem doesn't really do any good at all, but it stops you getting involved in game playing. At least they know that you know and it's out in the open."

This same doctor provided another reason for his preference for direct confrontation:

> "The stigma is regrettably reinforced by the medical profession," he said ". . . doctors themselves want to aid and abet the patient in their process of denial by saying 'well I know you are going to find it difficult to accept the diagnosis of alcoholism, so we won't make it. We'll pretend that it's your wife or your job or your depression'. And they'll call it a secondary illness, instead of saying 'this is a primary illness . . . it's a disease . . .' Doctors should be putting the searchlight on it and dispersing and dispelling the stigma."

Unlike most doctors who believed that direct confrontation would simply cause the patient to lie about his or her drinking, one of these doctors thought that he secured a more honest answer that way and that "the reliability of information gleaned in any other way is fairly suspect."

Defining drinking problems: a process of negotiation

For the doctor however, reaching the decision that alcohol consumption was a problem for the patient could herald the start of a lengthy

process whereby the doctor attempted to influence the patient's perceptions of his problems and the patient clung tenaciously to his own viewpoint. One general practitioner aptly summed up the sentiments of many others in the following words:

> "I think the main problem for the general practitioner is to bring the patient to a crisis of separation from something to which he has become very firmly attached."

It could take six months to 1 year, this doctor felt, to bring the patient to an acceptance of the drink problem. Another doctor felt that her few 'successes' had taken even longer to achieve:

> "Each one has taken years before I can even get them to admit there is a problem and even then it takes even longer for them to admit they need some help from outside and they can't do it themselves."

Frequently doctors commented on their lack of control over the progress or direction of events when dealing with patients' drinking problems. They were conscious that, in respect of alcohol consumption, their authority and expertise were more likely to be challenged than is usual in relationships with patients. Their advice and offers of help were also more likely to be ignored and rejected. "You are going as far as they will let you and that may not be far," said one doctor. Another saw herself as "entirely at their whim" and a third said that he would attempt to assess the problem "if permitted to by the patient."

Despite the difficulties and the length of time it took to bring patients to an awareness of their drinking problems, many doctors felt that this was the stage where they could make a valuable contribution. The following quotations illustrate how some doctors saw their role at this point:

> "What you are trying to do is to stimulate and to get a patient (a) to be aware of the problem, (b) be aware of the effects of the problem and (c) be willing to do something about it." [This was his main role he felt.]

> "The GP has an important role in identifying it and preparing the person to say, 'well, let's do something about it.'"

> "Once they've got to the stage of admitting they've got an alcohol problem, they've come so far they need to be referred."

As we shall see later, subsequent patterns of management varied from those who preferred to treat patients within general practice to those who preferred immediate referral to specialist services, but there was general agreement that action was a waste of time until doctor and patient had reached a point of shared understanding about the patient's problems. Then as one doctor said, "at least you've got a dialogue going."

Trying to help: difficulties in managing alcohol problems within General Practice

Only two general practitioners said that they had not seen a patient with drinking problems in the previous month. A further two general practitioners were unable to estimate how many they had seen but said it was 'a lot'. One of these was a doctor working in an area where, he said, practically every patient on his list had a drink problem. The other one, a trained psychiatrist, said that he saw "a higher number probably than an average general practitioner." He added, "I don't really count them. It's all part of a day's work." Apart from these four doctors, estimates of the number of patients with drink problems seen in the previous month ranged from 1 to 20, with an average of four.

Uncertainty about whether medical intervention was appropriate did not necessarily disappear once a drink-related problem was exposed. Whose problem it was might be at issue:

> "The great difficulty is to say what is an alcohol problem and what isn't. Are you going to say that a man who is driving when he had a bit too much has an alcohol problem? Well, some would say so but lots of people do it and they live quite normal lives in between. But on the other hand, when he does get knocked off for being drunk and charged then he could lose his job, the whole family could fall apart and then you really have a problem. But is that an alcohol problem or is that a law problem, legal problem, so it is very difficult to say."

Then there was the need to decide whether alcohol was a cause or a symptom of related problems or a manifestation of deeper troubles and how the 'problem group' could best be managed, for example:

> ". . . we came back to the problem, is this an anxiety problem with secondary alcoholism or is it alcoholism with resultant anxiety . . . I tend, I think, on the whole to look at alcohol problems as secondary. I think in many cases it is an attempt at an unconscious level by the patient to deal with problems that they find are overwhelming. Later on, at some point, I am not sure, the alcohol itself becomes *the* problem. What sparked it off in the first place is often a problem unrelated to the intake of alcohol direct at the time."

In addition, doctors might feel that medical care was appropriate for some aspects of the problem but not for others. In particular the need for psycho-social care, often more important than patients' physical needs, was in question. Comments by doctors in this study revealed their awareness of expectations from inside and outside the profession that they should provide 'whole person care' and be responsive to 'everything that concerns the well being of the patients'. While some doctors seemed to support this philosophy whole heartedly, most had doubts about the extent to which they could provide psycho-social care even if they wanted to. How doctors responded to the drinking problem depended both on their perceptions of the

problem and on their estimation of the extent to which it was their responsibility to provide the necessary care.

Seventeen doctors used referral as their basic strategy, not only because they preferred to limit their involvement in providing psychosocial care but also because they felt they lacked the appropriate skills, resources or personality to tackle the problem themselves, or simply because over the years they had become weary by their lack of success. Typical comments from this group were:

> "I think it needs psychiatric treatment."
>
> "I don't feel that I have the time to deal with the thing fully and there is such a lot that is in the psychiatrists' realm."
>
> "If they refuse to go [i.e. be referred] I wash my hands of them . . . I find alcoholics a pain."
>
> "I have in the past attempted to treat people from within the practice but the end result has always been very disappointing and therefore I feel it is better all round to refer such people to others with specialist knowledge."

Eight general practitioners said that they were prepared to offer a degree of support themselves, usually in conjunction with referral to another specialist service. "I think that we are limited in our resources and our knowledge" was one comment. "I am very happy to be involved in treatment but I invariably look to specialist help at some stage." Decisions about whether to refer or when to refer were based on an assessment of the individual patient, the relationship between the doctor and patient and on whether the doctor felt he was 'getting somewhere'. Occasionally, too, referral was seen to act as a 'short sharp shock'. As one doctor said, "sitting around in a waiting room with others with the same problem, often they see the messes other people are in and it gives them a shaking up."

Finally, there were eight doctors who felt that drinking problems were best handled in general practice. On the whole, these doctors felt that the patient would be better cared for in a familiar setting. This is how one doctor saw it:

> "The majority of action is within the practice, I would say, because it's a much less threatening situation potentially in the sense that they come here for everything so they see it as part of their general care and one can keep it here. One is likely to have continuing contact with them. As soon as you refer them it's outside the context of ordinary care . . ."

Another had this to say:

> "The problem with so many of these nearly intractable problems is that somebody will keep passing the buck to somebody else and think they are doing good whereas in fact you have got to solve the problem where you are. So, therefore, I usually use referral agencies less and less."

They were also doctors who thought that they could achieve as much if not more success by treating patients within their own practices:

> "I find the hospitals, without doubt, over the period of 30 years, to be almost useless," we were told, "I find it's very hard to get appointments when you want to get appointments quickly, because invariably you've got to act very quickly. I find if they're drunk, the hospitals don't want to know them and I find that when you've got them off alcohol there's no point in sending them up . . . I feel somehow we can help them more than the hospitals."

For these eight doctors, referral to a specialist took place only if the doctor felt he was getting nowhere or that the patient would benefit from a service he could not provide or if the patient requested referral.

General practitioners who preferred to manage alcohol problems themselves generally indicated a more positive attitude than their colleagues towards these problems. They were more likely to use words such as: 'interested'; 'rewarding'; 'challenging'; 'happy to be involved' when asked about their feelings towards managing drinking problems whereas words such as: 'exasperating'; 'difficult'; 'frustrating'; 'helpless'; 'bored' were more likely to be chosen, in particular, by doctors whose basic strategy was referral. These eight doctors were also more likely than the others to adopt a direct approach to patients if they suspected a drinking problem. Six of the eight said they did so as did five of the eight who preferred dual involvement while only two out of the 17 whose strategy was to refer took this approach. Finally, as we shall see in what follows, they tended to be more critical than their colleagues of hospital provision for people with drinking problems.

Perceptions of hospital services: a difficult partnership

Most doctors, 24, said that at least sometimes they advised patients to attend Alcoholics Anonymous and a few doctors, eight, made some use of other voluntary or community services. The majority of referrals, however, were to hospital services and so it is on doctors' perceptions of these services that we concentrate. While most doctors, 21, thought that hospital services were at least 'adequate', only eight general practitioners had no criticisms at all, and a few doctors were highly critical of hospital provision.

In the first place, a number of factors were seen to inhibit the patient or restrict the doctor from using hospital services. Waiting time for appointments was mentioned by seven doctors who stressed the need for a speedy response to a request for help from the patient. This is how one doctor explained it:

> "Their motivation is almost gone if they are going to have to wait for a month or 6 weeks before they get their first appointment. Here they are with this great spurt of energy; they are going to stop drinking. And then nothing happens for a month and that is the end of that. So they probably won't keep that appointment."

Six doctors said that patients felt there was a stigma attached to attending a psychiatric hospital or department for treatment and that this applied especially to patients from some cultures where it was regarded as bringing shame on the family. One Asian doctor, for example, told us that referral was regarded as a dire threat by his Asian patients, one which he used only as a last resort if family control or his treatment had failed. The need to refer to the hospital within whose catchment area they worked was a source of frustration to three general practitioners, particularly to one doctor whose practice was on the border between areas. A further two doctors said that the hospitals' ruling that patients must be sober on arrival prevented people attending.

The nature of the services offered by hospitals was also criticized. Two doctors did not agree with the kind of treatment provided, one because he felt there was too much reliance on the use of drugs and the other because he saw little value in 'supportive therapy'. Six doctors were critical of the knowledge, competence or attitudes of hospital staff. Frequent changes of doctor resulting in loss of continuity of care was mentioned. Hospitals, it was said, were often staffed by people from different cultures who were "not the best people to treat alcohol patients." Hospital care was impersonal. Hospital doctors were not really interested in alcohol problems and did not bother enough to help patients. Nor did they understand alcoholism or alcohol-related problems. Moreover, the attitudes of some hospital staff towards patients with drinking problems were stigmatizing.

The results of hospital treatment were criticized by nine general practitioners as poor, or certainly no better than they themselves could achieve:

> "I am never terribly impressed with the treatment and the management these people receive in the clinic . . . I don't think they are particularly better than I am at it" said one of these doctors.

Another doctor thought that hospitals could do 'an awful lot of harm' by making people feel they were 'not too bad'. There were very few units "with any decent record . . . that really get any good results."

On the whole, the eight doctors who felt that alcohol problems were best managed in General Practice, tended to be more critical of hospital provision and to feel that, in their area, these services were inadequate. Five of these eight doctors rated hospital services as 'inadequate'; two of the eight doctors who preferred joint management did so and five out of the 17 whose basic strategy was referral.

It should, however, be reiterated that only a few doctors were highly critical of hospital services. Despite the difficulties, most doctors used hospital services and were pleased to have an alternative source of support for patients and for themselves.

Views on education and support services

Studies of the detection and management of alcohol problems in general practice have usually concluded that the medical response to these problems might be improved by providing more and/or better

education on alcoholism and by stimulating a greater awareness of alcohol problems among general practitioners.

In the area where we conducted our study there were at least some opportunities to attend seminars or courses and, according to the doctors we spoke to, there was no lack of literature and information about drinking problems. Yet only four doctors had ever attended a seminar or course in alcoholism and the available literature was not always read. According to one doctor:

> "There is a journal of alcoholism that we seem to get through the post but nobody reads it. It's a free journal and it does arrive and occasionally we leaf through it and turn the pages."

While most of our sample felt that general practitioners' education and awareness of alcohol problems was open to improvement, doubts and reservations were also expressed by some doctors about the value of introducing the study of alcoholism into medical education. One doctor thought that lack of time was more important than lack of knowledge and awareness in preventing general practitioners from taking on patients' drinking problems. Another thought there was a lack of evidence to show that education and training in alcohol problems was worthwhile. Two doctors felt that alcohol education was inappropriate at undergraduate level and a further two doctors said that an in-depth study of the topic was unnecessary although alcohol education was useful 'at a superficial level' [i.e. the physiological aspects]. A more fundamental question concerning the rationale for alcohol specific education was implied in the comment by the general practitioner who told us:

> "I don't think alcohol is a problem, it is only a symptom, isn't it, of the underlying problem. I don't think there is anything special about it really. I think you have to try and make undergraduates see people in the total environment—which you can't do, of course, but we try—rather than pick out any particular area."

On the whole then, doctors felt that the difficulties they experienced in detecting and managing alcohol problems could not be resolved by those means alone.

Nor was the provision of more or better community services an adequate response although several general practitioners suggested the need for more comprehensive and better co-ordinated support services. Doctors' replies indicated the belief that these approaches merely emphasized the role of medicine in responding to drinking problems while ignoring the importance of wider social influences on the direction and outcome of medical intervention.

Difficulties in society's attitudes

None of the doctors in the sample entirely rejected involvement with alcohol problems as a legitimate part of their role. But as earlier sections of the paper have illustrated, responsibility for the immediate response to these problems was seen as shared with 'specialists' and 'experts', with workers in the voluntary and community services with families and, above all, with patients themselves.

At a broader level, responsibility was deemed to lie with governments, industry and the media whose job it was to change the public's attitudes towards alcohol consumption. Comments conveyed the view that tackling the problem demanded government action involving tax increases on alcohol, restrictions on the availability of alcohol and on advertising and more widespread publicity about the dangers of alcohol abuse. A number of doctors also thought there should be stricter legal sanctions against drunken offenders.

Several doctors drew an analogy between alcohol and smoking and referred to changes over recent years in the climate of opinion on smoking. Government action and more widespread publicity about the hazards of smoking had, they said, made it easier for general practitioners to broach the subject with patients and had made patients more receptive of the doctor's advice. Comparing his efforts to deal with alcohol and with smoking, one doctor remarked:

> "I gave up trying to deal with alcohol problems a long time ago. My efforts over the past 20 years have been devoted mostly to smoking . . . at least I am saving a man's life. I have had a few cases of success with smoking. And the general social tendency is towards a reduction in smoking over the last 10 years. People are gradually—advertisements and so on, programmes on television, and there is a general fall in the sale of cigarettes. So I feel I am doing something in my small way."

Trying to advise about alcohol, on the other hand, was seen as pushing against the mainstream of opinion about what was 'normal', 'desirable', 'socially acceptable' and deeply rooted in the beliefs and structures of our society. Many of the intellectual and emotional difficulties which doctors experienced in attempting to detect, define and treat alcohol problems, were seen to arise from beliefs and attitudes toward drinking in our society, which advice from the doctor alone could not alter. In short, general practitioners felt that political attitudes and current beliefs about alcohol would have to change before they could hope to accomplish a great deal more within general practice.

Discussion

The method

We have reported here, the views of one group of general practitioners and we would not wish to claim that they were necessarily representative of general practitioners as a whole. At the same time, the difficulties described by doctors in our sample in many respects echo the problems described in other studies in that managing patients with alcohol problems challenges some of the basic assumptions which govern expected doctor-patient relationships.[8] The expertise of the doctor, the patient's desire to get well, the common understanding of the patient's troubles, the doctor's control over the course of treatment, are all called into question. For the doctor the process of management is beset by interpersonal difficulties which are seen to

hinder the direction and outcome of treatment. In short, the difficulties which we have described and illustrated in this paper do not seem to be unique to our sample of general practitioners.

The research methods we adopted were, we hope, open enough to avoid stereotyped answers and sensitive enough to create a climate in which doctors were able to admit to areas of difficulty or dislike. As with other studies, our work is limited to reporting doctors' own perceptions of their attitudes and behaviour. It has, nevertheless, provided useful insights which future lines of enquiry might develop further using other methods of investigation, for example:

(a) Large sample surveys might investigate the extent to which doctors' attitudes and management patterns are influenced by factors such as personal characteristics, own drinking beliefs and habits, training, availability of services in the area and available support for managing drinking problems within general practice;

(b) Observational studies might examine more closely the process of negotiation through which a common understanding of the patient's problems is reached. While ideally, such studies should take place in real life situations, the practical and ethical problems involved may prove too great. Research may have to rely on 'second-hand' observation techniques, for example, role-play;

(c) There is considerable scope for evaluation studies to examine the effect on practice of experimental inputs. Such studies might, for example, attempt to assess the impact of methods of detecting alcohol problems, information packages for doctors and patients, or the provision of different forms of training or support on general practitioners' attitudes towards and management of drinking problems;

(d) 'Consumer research' might test the extent to which doctors' observations of their patients' attitudes and responses to medical intervention are shared by their patients. Why for instance are patients reluctant to talk about their drinking with their doctors? How far is it, as doctors often feel, because patients are denying the problem or do not want to change their drinking behaviour? How far is it because patients do not see the doctor as an appropriate person to turn to or because the structure of the medical consultation makes them feel hurried, inarticulate, afraid of wasting the doctor's time?

Admitting the difficulties

In the course of the paper, we have shown how the diagnosis of drinking problems, particularly in the early stages, poses intellectual and emotional difficulties for general practitioners, notably because they must first define as a problem behaviour which is generally regarded as normal and desirable and secondly because they must do so despite doubts about the likely success of their efforts to help people with drinking problems. Expectations that these problems should be 'curable' add to the pessimistic frame of mind with which many doctors approach the management of drinking problems. Such an outlook, as Blaxter has observed elsewhere,[10] colours not only

the management of the problem but also the doctor's willingness to diagnose symptoms as alcohol related in the first place.

We have also tried to show how beliefs and attitudes towards the use of alcohol and the place of medical intervention raise emotional barriers which can block the doctor's readiness to offer a diagnosis of 'drinking problems' and the patient's readiness to accept it. Diagnosis of alcohol problems involves more than just assigning a name to the patient's problems or offering a treatment; it involves 'the creation of the idea that it is a problem'. This requires a willingness by doctor and patient alike to engage in a possibly lengthy process of negotiation until a shared understanding of the problem is reached.

As others have argued before,[7,8] it is not helpful to dismiss as mere rationalizations the reasons general practitioners give for the difficulties they experience in becoming involved in alcohol problems. Rather they draw attention to the importance of doctor-patient dynamics in the detection and treatment of alcohol problems and to the importance of extraneous influences on the direction and outcome of medical intervention. Meeting the difficulties requires concerted action at a number of levels.

Meeting the difficulties

Education and Training. Despite changes to accommodate an introduction to, and training for, general practice, medical education still does not adequately prepare doctors for the kinds of problems presented to them in general practice.[11] Indeed, postgraduate traineeship has been described as "a 're-orienting process'" during which young doctors have "to change many attitudes to practice acquired in hospital" in order "to help them tolerate the 'less well defined, less structured, more amorphous scene of general practice.'"[11] It is doubtful, however, whether even traineeship imparts the interpersonal skills, techniques and confidence needed to tackle 'difficult' problems of which drinking is only one example. Yet a first approach to overcoming some of the difficulties general practitioners describe in detecting and managing alcohol problems might be made through education and training:

(a) Undergraduate education might, perhaps, direct students towards an examination of concepts of illness, of therapeutic aims, of the patient role and the role of the doctor in responding to problems with a strong psycho-social component. Education at this level might aim to prepare doctors, conceptually at least, to cope with 'uncertainty' rather than with certainty.[12]

(b) At trainee level, opportunities could be provided for acquiring more specific knowledge and skills about the management of alcohol problems. Young doctors might be introduced to therapeutic approaches and techniques, such as counselling, which, traditionally have not been part of their armoury but which might better equip them to deal with the complex problems they will meet in general practice. The current network of general practice trainers allows for the development of training at local level and for the provision of a supportive framework within which to gain experience of alcohol prob-

lems. It may be necessary, however, first to prepare and train the trainers for this task.

(c) Such efforts do not, of course, address the needs of doctors already in practice. Few of these will have remained in blissful ignorance of drinking problems. Most will have acquired some store of knowledge and possibly devised constructive ways of coping with the difficulties we described earlier. Locally organized workshops might enable doctors to up-date their knowledge and, more importantly, provide a forum for sharing knowledge and management skills and meeting other professionals or community groups involved in alcohol problems.

The resources for providing theoretical and practical knowledge about the detection and management of drinking problems are available to some extent in most areas. There is, however, a need to devise appropriate materials and methods for training doctors to acquire the necessary skills to enable them to work, with confidence, with problem drinkers.

Support Services. The work of Shaw and his colleagues has shown that acquiring experience of dealing with drinking problems in a supportive environment is a crucial element in securing professional commitment to the detection and management of alcoholism.[7] Following the work of Shaw, attempts have been made to meet the need by setting up community alcohol teams in some areas. Overall, however, most general practitioners still lack such support. Yet possibilities for support may be found within existing structures: (i) within general practice; (ii) from specialist services—medical, voluntary and self-help; (iii) from social services.

How could support be mobilized within existing services? The following strategies might be considered:

(a) The development of group practices, the growth of health centres and the continuing emphasis on the primary care team provide a basis for the sharing of problems between practitioners with different interests, skills and training.[11] But all too often, beyond alerting general practitioners to the existence of a drink problem, other primary care workers, such as social workers or health visitors, are as reluctant as doctors to become more deeply involved.[7] Their needs for education, training and support are as important as that of doctors if the professions are to support one another.

(b) Equally it is necessary to take account of general practitioners' attitudes towards the role of other professionals in responding to alcohol problems. General practitioners are often reluctant to delegate problems to other workers. For instance, drinking problems may be seen as outside the scope of the health visitor, already fully occupied with mother and child; social workers and nurses (usually female) may be 'protected' from drinkers (usually seen as male); or general practitioners may lack confidence in the skills and approaches other professionals have to offer.

(c) Support could also be provided by bringing specialists, hospital

consultants or those who provide specialist voluntary services, into general practice. The results of this approach, tried elsewhere,[11] have indicated some of the benefits it might bring. Patients would receive help in a familiar, accessible, non-stigmatizing setting; general practitioners and other practice workers would have opportunities to extend their knowledge and management techniques and would remain in close contact with their patients' care; in-coming 'experts' would benefit from the general practitioner's knowledge and experience of the patient and could gain a better understanding and increased respect for the work done in general practice.

(d) More generally, there is a long recognized need to find ways of improving liaison and co-operation between those who provide services. It is possible that patients' willingness to attend another service is influenced as much by the degree of confidence in the service conveyed by the doctor as by the factual information provided. Close, more personal contact between doctors and other professionals or lay services is needed if such confidence is to be felt and conveyed.

Co-ordination and Co-operation. It is possible that the development of community alcohol teams recommended by Shaw *et al.* remains potentially the most effective approach to securing general practitioners' commitment to detecting and managing alcohol problems. We would argue, however, that preparation for the task could be begun much earlier at student or trainee level and that continuing support could be fostered within the primary care team itself. Closer liaison with specialists in the alcohol field; a willingness among specialists to work within general practice rather than wait for general practitioners and patients to come to them; the provision of opportunities to meet colleagues in their own and related professions; these things could go some way towards encouraging general practitioners to work with drinking problems. Efforts to improve the response to alcohol problems through these means could best be directed towards local initiatives to allow both for the forging of personal ties between service providers and for the development of a co-ordinated response based on a knowledge of local drinking cultures, local needs and services available in the area.

Changing Public Attitudes. Educational change and the provision of a supportive environment at best provide only a partial answer to doctors' difficulties in managing alcohol problems. At worst, by emphasizing the centrality of the medical response to alcohol problems, they divert attention from the importance of extraneous political and social factors on the work of general practitioners. It is unrealistic to expect general practitioners to respond enthusiastically to the task of detecting and managing alcohol problems while political and economic interests sustain public beliefs and attitudes towards drinking which make it difficult for doctors and patients alike to acknowledge the existence of the alcohol problem. Strategies to improve the medical response to drinking problems are likely to achieve limited success unless they are supported by wider political measures aimed at altering public perceptions of the use of alcohol.

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Case Studies I

The following case studies were prepared by Saul Cohen, M.D.

Case 1

50 year old male referred by Employee Assistance Program coordinator because of increasing absenteeism and inefficiency at his job as a senior storekeeper in chronic care nursing home. Rapid interviewing technique revealed a positive response to questionnaire in over 75% of the questions. Physical examination revealed extensive weight loss from 135 to 95 pounds in the past year combined with tachycardia of 144/minute, BP 140/90, and tenderness over right upper quadrant combined with voluntary muscle guarding and rigidity, which prevented proper palpation of abdominal organs. Chest examination confirmed evidence of chronic obstructive pulmonary disease based on two packages of cigarettes daily. Drinking history: four beer daily plus night cap of three-four ounces of vodka for over five years. Subsequent laboratory screening tests revealed a macrocytosis of 120 and a gamma glutamyl transpeptidase (GGT) of 1291 along with moderate elevations of blood alcohol to 80 mmol (368 mg %) and moderate impairment of other liver enzyme tests such as SGOT and LDH along with hypoproteinemia-hypokalemia.

The above formal screening tools led to confrontation of patient and his wife with the diagnosis of chronic non-compliant alcoholism complicated by malnutrition, alcoholic liver disease stage I-II and alcoholic cardiomyopathy. A treatment contract was finalized to accept hospital detoxification followed by three-week rehabilitation program. Hospitalization went smoothly with two-week resolution of acute phase resulting in a satisfied patient and spouse.

Following hospital discharge he and his wife enrolled in a three-week rehab program which she completed in spite of his dropping out after one week. However, in spite of this evidence of non-compliance with the treatment contract, he and his wife agreed to a second option, namely private office visits on a monthly basis. Sobriety was maintained on this program for the next three years, with return to productivity in the workforce along with a weight gain of 30 pounds in the first three months of sobriety. GGT dropped from 1291 to 12 units.

Practice points:

1. The above case confirms the need for presentation of factual information in a confrontation with the alcoholic and his spouse, plus willingness on the part of the physician to be flexible in offering alternative options rather than being dogmatic.
2. Any unexplained tachycardia in the absence of hyperthyroidism, coronary artery or valvular heart disease or hypertension should invite a diligent search for a history of alcoholism. The tachycardia in this case gradually returned to a normal rhythm following three months of abstinence and good nutrition supplemented by daily intake

of B-complex vitamins leading to correction of vitamin deficiency, hypoproteinemia, and electrolyte loss.

Case 2

83 year old male, French descent, readmitted to hospital with a massive hemarthrosis of right shoulder and arm which came on spontaneously with no history of trauma. He recently survived a resection of a large abdominal aneurism with a two-week hospital stay. He had a long history of daily consumption of six ounces of brandy. He had gouty arthritis treated with allopurinol and indomethacin. On admission he was found to have a marked abnormality in PTT with normal PT and marked prolongation of bleeding time, along with disturbed hepatic function tests suggestive of alcoholic liver disease stage I-II. He was treated for a drug-induced coagulopathy, the result of a combination of alcohol, allopurinol and indomethacin. Treatment consisted of fresh frozen plasma platelet transfusion and cryoprecipitate.

Practice point:

Liver decompensation produced by alcohol intake of long standing in an elderly patient increases vulnerability towards blood coagulopathy disorders when combined with average adult doses of drugs like indomethacin and allopurinol.

Case 3

52 year old male, former CNR employee, unemployed for three years. He was referred by an internist for chronic non-compliant alcoholism following admission to hospital for severe thrombocytopenia (11,000) and leucopenia (1300) leading to extensive bruising all over his body, against background of gouty diathesis and alcoholic liver disease Stage II-III with abdominal ascites. At that time his prognosis appeared poor with ultimate demise likely, following liver failure with encephalopathy or acute hemorrhagic diathesis secondary to progressive thrombocytopenia. However, he showed a surprising overall improvement on a 40 gram restricted protein diet, lactulose therapy, aldactone 50-200 mg daily, plus nutritional supplements such as folic acid, iron and B-complex. It may be noted that allopurinol therapy for gout had been stopped while in hospital, based on adverse effects noted in the literature pertaining to drug-related blood and hepatic disorders.

Practice points:

1. Since chronic non-compliant alcoholics are prime candidates for hepatic decompensation, it is wise to be cautious in prescribing any hepatotoxic agents such as allopurinol products.

2. One should also remember that alcohol-induced gout will disappear spontaneously with sobriety.

Case 4

49 year old female admitted to hospital with hematemesis and delirium tremens state against background of previously well-documented history of chronic non-compliant alcoholism, with previous biopsy providing evidence of alcoholic liver disease stage II-III. Her total bilirubin was 103, alkaline phosphate 270, AST 1359 and ALT 433 (Hb 6.2 G and platelets 65,000, P.T. 15 seconds with factor 1.3, serum ammonia 53 mmol/L), with liver span of 15 cms below right costal margin combined with abdominal ascites. She was diagnosed as having hepatic encephalopathy and treated with 40 gram protein, one gram sodium diet, 1000 cc fluid restriction daily and aldactone 100 mg QID. Following increasing encephalopathy, aldactone was discontinued and replaced with spironolactone 50 mg BID and lactulose 30 ml TID with improvement within five weeks. At that time her ascites had subsided and her thinking was very lucid, to the point where she accepted a follow-up rehab program for three weeks following discharge from hospital.

It may be noted that the above patient has maintained total sobriety for the past three years. She has been forced to return to hospital on four separate occasions for repeat sclerotherapy for recurrent hematemesis from refractory esophageal varices.

Practice points:

1. Hepatic encephalopathy in patients with alcoholic liver disease can be precipitated by:
   a. Gastrointestinal hemorrhage.
   b. Sedation.
   c. Electrolyte/mineral imbalance.
   d. Acid/base imbalance.
   e. Infection.
   f. Shock.

2. Laboratory tests which confirm the diagnosis of hepatic encephalopathy are abnormal liver function tests, hypoalbumenia and prolonged prothrombin time. The arterial blood level of ammonia is usually abnormal but may be normal in spite of moderate degree of encephalopathy.

3. Survival in alcoholic cirrhosis is highly dependent upon total abstinence with improvement of five-year survival rates from 40% to 60%.

4. Bleeding from esophageal varices can be a major cause of immediate mortality for patients with cirrhosis.

5. Sixty percent of patients with alcoholic liver cirrhosis show evidence of bleeding from esophageal varices and 40% bleed from peptic ulcers either gastric or duodenal.

6. Endoscopy plays a vital role in the diagnosis and management of UGI bleeding in patients with cirrhosis preferably by an endoscopist experienced in the techniques of esophageal sclerotherapy at the time of bleeding.

Case 5

54 year old male with a 16-year history of daily intake of beer and vodka, admitted to hospital observation unit in emergency with history of grand mal seizure occurring at work. He apparently had been reducing his daily alcohol intake for five days prior to admission, following an excessively large amount of alcohol consumed at his daughter's wedding. In the observation unit he developed a further grand mal seizure during which he fell out of bed and fractured his hip. Following admission to hospital and surgery for the fractured hip, he went through a very stormy course of delirium tremens with full-blown disorientation, confusion as to time, place and person, and hallucinations.

Practice points:

1. Seizures of grand mal type can occur in up to 16% of alcoholic patients within 48 hours of decreasing or stopping intake of alcohol. Patients may still have considerable levels of alcohol in their blood with seizures triggered by a decline rather than a total disappearance of alcohol in the blood.

2. One third of untreated alcohol withdrawal seizures progress to delirium tremens.

Case 6

55 year old male with history of documented alcoholism over past 20 years, with loss of business through bankruptcy and loss of family and wife through divorce. Recently developed acute delirium tremens state in correctional centre where he was serving a sentence for a Driving While Impaired charge with a breathalyser reading recorded above 200 mg % alcohol. Previous history of two DWI charges in the past five years.

Practice point:

Valuable information comes from the relationship of impaired driving charges to alcoholism--particularly when breathalyser readings are consistently well above 150 mg %.

- One arrest indicates a 70% probability of alcoholism.
- Two arrests indicate a 90% probability of alcoholism.
- Three arrests or more indicate 100% probability of alcoholism.

Case 7

39 year old male admitted to hospital (July 31, 1987) with abdominal pain and hematemesis for one week, against background of alcohol abuse (13 ounces of whiskey daily for three months). Divorced 1979, and two Driving While Impaired charges 1979-1980. Lab tests: Hb 14.8, WBC 6.4, serum amylase 3000, MCV 101, calcium and protein normal, SMAC 20. Mild elevations of transaminase but no abnormalities of bilirubin or alkaline phosphatase. Shortly before endoscopy, two days after admission, he developed a generalized grand

mal seizure which the neurologist diagnosed as a likely alcohol withdrawal seizure. Subsequent scope revealed Mallory Weiss erosions at cardio-esophageal junction as source of hematemesis.

Practice points:

1. Over 50% of pancreatitis cases are related to alcohol abuse.

2. Clinical manifestations of pancreatitis can become evident in from 5-15 years with heavy regular intake of alcohol.

3. Abdominal pain may be precipitated by a large meal or a drinking binge, and is characterized by poorly localized upper abdominal location, with radiations to the back associated with nausea and vomiting, which is partially relieved by leaning forward.

4. No single laboratory test confirms the diagnosis, but the serum amylase remains the initial test of choice for the diagnosis of acute pancreatitis.

5. The primary care physician who is familiar with the medical complications of alcoholism such as pancreatitis will be able to begin management of this patient in a timely fashion. Certainly it is up to the primary care physician to convince the patient that the medical problem and the alcohol problem are linked.

Case 8

58 year old woman. Married 38 years with three children, referred by the family physician to a neurologist for three-week history of balance and coordination problems. She readily admitted to drinking two to three drinks (three times) weekly for 25 years with pattern changing in last two years to a daily intake of an average of six to eight ounces of whiskey combined with chlordiazepoxide 10 mg x 2 at bed-time. Triggers which changed her drinking pattern were her husband's retirement and 86 year old mother's death within a two-year period. Her CAT scan indicated mild cerebellar atrophy. Laboratory results were MCV 103, GGT 123, SGOT 144, SGPT 86, and LDH 341.

Practice points:

1. Recent onset of ataxia in the patient was likely due to dual dependency on alcohol and benzodiazepine aggravated by post bereavement depression.

2. Careful review of family and social histories revealed the need to treat depression and marital family dysfunction accompanied by cessation of alcohol and benzodiazepine products.

Case 9

Healthy 21 year old male in second-year business administration admitted to psychiatric ward with history of disorientation with auditory and visual hallucinations, following a cannabis and alcohol episode of intoxication. He had a problem with alcohol and cannabis since his early teens, with loss of control while drinking occurring in most cases after the first drink. Recent crisis triggered by separation from girlfriend leading to depressive reaction with suicidal ideations.

Practice point:

A situational reactive depression can be aggravated by the concomitant use of alcohol and cannabis products in vulnerable individuals. In this instance it would appear that the combination of cannabis and alcohol led to a drug-induced psychotic episode. Following the stabilization of this adverse cannabis-alcohol reaction, the patient was confronted and accepted the need for a total sobriety drug-free program with long-term affiliation in NA and AA.

Case 10

53 year old male construction engineer unemployed for eight years, currently a part-time taxi driver, divorced. History of long-term dependence on alcohol and analgesic codeine-acetominophen products for more than 12 years, following surgery for bilateral carotid artery stenosis, two bowel obstructions, two cataracts, two herniorrhaphies. He was admitted for evaluation of shortness of breath with chest pains against a recent background of a Driving While Impaired charge. Examination revealed no evidence of heart disease as a cause of chest pain, but did reveal alcoholic myopathy, reflux esophagitis and gastritis secondary to alcohol and ibuprofen. Metabolic dysfunctions were noted as follows: hypertriglyceridemia TG 12.3, impaired carbohydrate metabolism sugar 8.6, gouty diathesis, uric acid 11, alcoholic myopathy, CPK 616.

Practice point:

Painful tender muscles in chest wall and extremities occurring without trauma and associated with marked elevation in muscle enzyme tests (CPK) should suggest a diagnosis of post-alcohol myopathy when accompanied by a history of preceding heavy drinking sessions.

Case 11

66 year old woman had been taking warfarin for atrial fibrillation for three months when it was noted that she was repeatedly missing her office appointments for prothrombin times. The gravity of the situation was explained to her with the need stressed for better compliance. No history of alcoholism was suspected in what appeared to be an intelligent well-motivated patient. Subsequently the warfarin had to be discontinued because of further non-compliance followed by a CVA with aphasia, hemiparesis and incontinence. It was only then that the physician learned from the patient's daughter that his patient was an alcoholic who lived alone drinking nightly with poor recollection of degree and amount consumed.

Practice point:

Patients with medication-compliance problems may be harbouring an underlying alcohol/drug dependency problem. It is important to seek office confrontation with the non-compliant patient and his or her family whenever possible in order to obtain the full picture.

Case 12

42 year old male construction worker married six years, separated for one year, admitted with post-concussion after MVA with laceration left temple area of scalp. His general appearance suggested sobriety in spite of a blood alcohol level of 250 mg/dL, an MCV of 109, and GGT 450 along with elevation of ALT and AST. Drinking history indicated a day to day intake of 3-4 vodkas and 1-2 beer each evening for over 20 years, with recent attendance at a drinking reception the evening immediately prior to MVA.

Practice point:

The absence of signs of intoxication in a patient with blood levels of alcohol two-three times the legal level is a "red flag" indicator of increased tolerance that goes with alcoholism, particularly when combined with social and drinking history and laboratory evidence of alcohol-related abnormal findings.

Case 13

42 year old female bookkeeper in a large trucking industry referred by her supervisor, for increasing work inefficiency, frequent tardiness and absenteeism. The supervisor noted that the employee's writing had deteriorated and that on many occasions her speech was slurred. She also had poor coordination and an ataxic gait. The latter symptoms were described by the supervisor as "erratic drunken behaviour" in an employee who never smelled of alcohol at any time. Subsequent examination and preview of lifestyle revealed a history of long-term abuse of 222's for self treatment of intractable headaches to the point where the employee was using 25-30 tablets of 222 per day.

Practice point:

The patient who presents the clinical picture of intoxication with absence of alcohol on breath and in the blood should be considered a prime suspect for analgesic tranquilizer and/or sedative abuse. The above patient recovered quickly following admission to a three-week rehabilitation drug-free program. She subsequently joined AA with a follow-up which included stress-reduction and problem-solving techniques to reduce triggers of tension headaches.

Case 14

44 year old male farmer married 23 years, three children, referred to hospital with refractory unresolving right lower lobe pneumonia. Past history and review of systems were all normal, apart from recent pneumonia and evidence of a heavy daily drinking pattern, which appeared to be triggered by the death of his father of cancer six years previously. He had been advised by his family physician to quit alcohol one year ago because of alcoholic liver damage but did not heed this advice. On this admission his serum transaminases were elevated to double normal levels along with bilirubin of 86.

Practice points:

1. Patients who have been advised to quit drinking by their physician because of liver damage but continue to drink alcohol are alcohol-dependent, demonstrating zero insight and judgement in acceptance of the diagnosis of alcoholism.

2. Altered immunity systems in alcoholics predispose them to infections, usually gram negative pneumonias which prove refractory to treatment.

Case 15

48 year old male, divorced. Hospital porter with inappropriate use of analgesics and alcohol leading to sexual dysfunction, threat of loss of job, concern of friends and damage to his emotional and physical health. A thorough evaluation for organic causes of sexual dysfunction and chest pains showed no positive findings to account for same. He was advised to stop all medications and seek the fellowship and serenity program offered by AA. Further progress was poor, based on his inability to surrender to the need to turn his life over to AA and a greater power. His alcohol- and drug-seeking behaviour continued episodically.

Practice points:

1. The above case demonstrates the type of patient who appears to be very knowledgeable about the illness aspects of chemical dependency but lacks the motivation and insight required to prevent relapses. He tends to blame outside events and people for his problems and refuses to accept ownership of his addiction process. He tends to verbalize and regurgitate what he learns in groups but no subsequent responsible behaviour changes occur in his living process. He likely will continue to tax physicians' patience for many years to come until he reaches a psychological bottom where he surrenders to a 100% acceptance of sobriety or else meets his unfortunate ending by drug-alcohol misadventure.

2. Sexual difficulties including male impotence are a common complaint in alcoholism, resulting from a toxic effect of alcohol on testes and liver. Testosterone metabolism is speeded up by increased induction of hepatic enzymes leading to hypotestosteronism accompanied by hyperestrogenism.

Case 16

52 year old male, divorced, sheet metal worker, unemployed for four months. Admitted Dec. '86 with rectal bleeding against background of chronic non-compliant alcoholism, drinking 3-4 beer and 26 ounces whiskey daily. He signed himself out of hospital within three days as the result of untreated withdrawal. Eventually he readmitted himself to hospital under another surgeon two months later at which time laparotomy revealed carcinoma of rectum with liver metastases.

Practice point:

There appears to be a relationship between cancer of the large bowel and heavy drinking in the alcoholic segment of our population—particularly among heavy beer drinkers. Other research workers have reported a similar relationship between alcohol ingestion and cancer of mouth, larynx, esophagus, liver, breasts, thyroid and skin.

Case 17

59 year old male married 30 years, two children, retired accountant. Admitted with history of seizures, grand mal in type, occurring against background of cerebral infarction one year previously. Current medication Dilantin 300 mg once daily with questionable compliance coupled with daily alcohol consumption of brandy 6-10 ounces. His internist noted borderline diabetes Type II controlled with 1800 calorie diabetic diet plus glyburide 5 mg BID along with atrial fibrillation and hypertensive cardiovascular disease controlled with moduret o.d. and captopril 12.5 mg TID combined with digoxin 0.125 o.d. CAT scan demonstrated residual old large infarct in right posterior parietal area as well as a small left parietal infarct.

Practice points:

1. The patient's non-compliant use of Dilantin was undoubtedly enhanced by alcohol abuse leading to episodic exacerbations of post-infarction seizure disorder.

2. Ideally he should have been considered for long-term acute anticoagulant therapy with warfarin in view of his history of atrial fibrillation and multiple cerebral infarcts. However the internist wisely decided against such therapy because of the patient's chronic non-compliant alcoholism.

3. His internist also stopped glyburide, since elderly diabetic alcoholics are particularly vulnerable to the hypoglycemic effects of such agents, due to a long half-life and decreased renal excretion.

Case 18

46 year old male with 25 year history of alcoholism. Multiple attempts at treatment have failed to date. Admitted to hospital with a carboxyhemoglobin level of 16% following a suicidal gesture—car motor left running in garage with doors closed. The suicide gesture was triggered by a loss of job and girlfriend.

Practice points concerning suicide risk in alcoholism:

1. There is a definite alcohol-drug connection with suicide. Fifty-one percent of male victims were involved with alcohol whereas 73% of female victims were involved with drugs other than alcohol.[1]

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[1] *SADAC Research Report: Suicide in Saskatchewan: The Alcohol and Drug Connection.* Regina: Saskatchewan Alcohol and Drug Abuse Commission, 1988.

2. Among methods of suicide, carbon monoxide was fourth at 12.5% compared to gunshot 43%, hanging 17%, and drug overdose 15%.[2]

Case 19

43 year old female, married, two children, co-owner of a country hotel with her husband. Readmitted for third time with marked weight loss, anorexia, nausea and vomiting, following weekly intake of approximately 48 ounces of whiskey. Previously admitted on two occasions in the past two years with a firm diagnosis of alcoholic liver disease at which times she was strongly advised to quit drinking 100%. These admissions were followed by sobriety intervals of up to five months at a time. Laboratory findings confirmed progressive alcohol liver disease with bilirubin 36, GGT 1500, SGOT 228, SGPT 248.

Practice points:

During the past ten years, the incidence of alcoholic liver disease has increased markedly among women for the following reasons:

1. The amount of alcohol consumption required in females to develop liver cirrhosis is 50% that of males, due to smaller body size and greater proportion of adipose tissue leading to higher blood alcohol concentrations.

2. Steady drinking patterns in females are more likely to lead to more rapid (13 years vs. 20 years) development of liver damage in shorter period of time.

Case 20

70 year old female living alone since death of husband 15 years ago, admitted to hospital with fracture of right femoral neck and right humeral neck following a fall at home. She did well following surgery (which involved pinning of the fracture of the right femoral neck) until the third post-operative day at which time she became disoriented and agitated and began to demonstrate an acute visual hallucinatory state. Her blood alcohol level on admission was 37 mmol (170 mg %) with MCV of 115 along with borderline increase in liver enzyme tests. She was subsequently stabilized for alcohol withdrawal syndrome, to the dismay of her daughter who could not believe her mother could be alcoholic.

Practice points:

1. Routine blood alcohol, MCV and liver profile screening preoperatively is very useful in detection of alcohol abuse with earlier initiation of proper regime to circumvent the severity of post-op in-hospital acute withdrawal syndromes.

2. Drinking even in moderation in the elderly is a risk factor for increased osteoporosis and multiple fractures, particularly in post-menopausal women.

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[2] *SADAC Research Report: Suicide in Saskatchewan: The Alcohol and Drug Connection.* Regina: Saskatchewan Alcohol and Drug Abuse Commission, 1988.

Case Studies II

The following case studies were prepared by staff of the Saskatchewan Alcohol and Drug Abuse Commission and its funded agencies.

Case 1

R.B. is a 17 year old male who has been living at home with his parents and five siblings. He was referred by a detox centre where he had spent eight days detoxing from cannabinoids.

R.B. had initiated the treatment process by presenting himself to a city police officer in the youth division and requesting assistance. The crisis which appears to have initiated this action was an attempted suicide by R.B.'s father in front of R.B. and two other siblings. R.B.'s father and mother had recently been arguing a great deal about his father's use of alcohol.

R.B. reports he began using drugs, mainly marijuana, in grade nine. He continued to use marijuana but also began to use hashish, hash oil, LSD, valium and alcohol. He recalls a feeling of well-being after using drugs and felt that all his troubles seemed less important after usage. R.B. reports that recently his drug use has begun to cause him some problems. These are legal issues including charges of theft under $1,000, making threats, and assault causing bodily harm. He has also been requested to leave the family home because of his deteriorating behaviour, and has remained apart from his family for three months.

While in treatment R.B. experienced some difficulties following the rules and regulations at the treatment centre. He continually tested the rules and the staff. He is very skillful at manipulating clients and staff and is quite a practised con artist. R.B. was active in the group therapy sessions but his activity appeared to be more on the level of supporting destructive behaviour rather than dealing with his own issues.

During this time of testing and challenging R.B. continued to complete his written work very well. As treatment progressed and as he was confronted with his behaviour and was provided with consequences for his negative behaviour, he began to settle somewhat. During individual counselling sessions he was able to identify areas in his life that need attention, but in group settings he still is a leader in destructive behaviour.

In the final week of treatment R.B. was removed from the group therapy session for a period of time. This was essentially to enable the group to work on issues without his encouragement to destructive behaviour. It was also a time for R.B. to complete some written work on his personal issues.

After-care planning included recommendations that R.B. attend Narcotics Anonymous meetings on a regular basis, attend regular counselling sessions with the Family and Youth Co-ordinator and the

Out-Patient Clinic and that he make some lifestyle changes including abstinence and changes in his social activities.

R.B. stated that he was prepared to attend a few NA meetings but that he would not give up seeing his substance-using friends nor would he continue to see the out-patient counsellor. R.B. did agree, however, to continue to see his Youth Court Worker as he has an outstanding charge. R.B. was discharged after completion of the three-week in-patient program to the care of his mother.

Practice points:

1. The use of more than one drug is common among substance-abusing youth. This possibility should be considered by the physician when treating young patients with alcohol- or drug-related problems.

2. This case illustrates the persistence and versatility of approach that are sometimes required by the physician and others involved in the treatment of those with a dependency problem.

3. An understanding of personal and group dynamics in certain situations is also essential.

Case 2

A.W. is a 28 year old woman married for four years to a 31 year old alcoholic who cannot keep a job. He tried AA three times but has been unable to remain sober. A.W. has left him on four previous occasions, returning each time on the basis of his promises to change.

A.W. was not working outside the home and had no money available to her when she arrived at Transition House with her daughters aged three years, one year and two months. She left because her spouse emotionally and physically abused her: he swore at her, constantly belittled her, forced her to do things against her will, assaulted her sexually, threw things at her and wrecked things in the home. He also physically abused the children; all the children received bruises from spankings and the oldest daughter was also slapped, grabbed and pushed. As a result the oldest daughter was a very angry child who hit and acted out her anger towards her mother and the other children. All the children were afraid of their father, running, hiding and screaming when he raised his voice.

While the family was at Transition House it became apparent that there was a strong possibility the children had been sexually abused by their father. Although the children showed symptoms of sexual abuse there was no actual proof and no charges were laid.

A.W. and her children were at Transition House for 42 days, during which time they received help to apply for financial assistance and a parent aide as well as police and legal protection. They were also given medical referrals and aid in finding housing. A.W. was referred to Al-Anon and a life skills course and received employment readiness information. The children were referred to the Merici Centre to deal with the effects of the probable sexual abuse.

When A.W. and her children finally moved into an apartment of their own, A.W. felt secure and empowered as a result of the support system made up of new friends she had met at Transition House and the services she had become involved with. She felt she could now survive without her husband and that their future relationship (if any) would be on a more equal footing.

Practice point:

It is crucial not to overlook the needs of the family of the alcohol dependent individual. The physician must, at all times, be alert to signs and symptoms which may indicate the occurrence of physical and sexual abuse. To provide adequate support in abusive situations requires familiarity with all the various groups and organizations involved in the social services network.

Case 3

J.H. is a 40 year old woman with a lengthy history of alcohol and benzodiazepine abuse. She had initially been placed on the benzodiazepines in her early 20's when she saw a psychiatrist for assistance with difficulties in her marriage. Shortly after, she began to abuse alcohol as well.

J.H. was eventually admitted to a psychiatric unit following a suicide attempt with an overdose of pills and alcohol. From the psychiatric unit she was referred to Calder Rehab Center for in-patient treatment in the addictions program and then began attending the Out-Patient Clinic for further assistance and support, attending group sessions and individual appointments. Following her entry into treatment, J.H.'s spouse filed for divorce and custody of their three children. J.H.'s self-esteem was such that she did not see herself as able to care for her children adequately so she did not protest the custody arrangements.

During her attendance at the Out-Patient Clinic, J.H. has sought assistance to deal with her feelings of guilt and inadequacy as a wife and mother, her feelings of guilt and shame about her drinking and pill abuse, her feelings of grief in regard to her separation from her spouse and children and her belief that she is an incompetent, stupid and useless person.

J.H. is now in the process of up-grading her education and attends AA regularly for support in her sobriety. She has grown considerably and although still separated from her children, is able to feel pleased about her visits with them.

Practice points:

1. Women are more frequently prescribed psychoactive drugs than men, leading to a higher incidence of dependency problems.

2. Negative feelings around performance as spouse and parent and general low self-esteem are also common among women.

Case 4

V.C. is a 38 year old Metis from a Northern Saskatchewan village. He was the seventh of 16 children in a family where the parents abused alcohol.

He has been married for 17 years. He and his spouse had five children, one of whom died of double pneumonia at the age of three months and one who was stillborn. V.C. and his wife subsequently adopted two children.

On the occasion of his last assessment, V.C. admitted to using approximately two gallons of home brew daily. He usually drank with friends and co-workers either at home or at his friends'. He occasionally drank with his parents, with his spouse or alone, and sometimes while driving or outdoors.

His symptoms in relation to alcohol use included blackouts, increased tolerance, unsuccessful attempts to stay sober, guilt feelings, and a feeling of hopelessness and helplessness.

When he stopped drinking he experienced shakes, sweating, seizures, nausea and vomiting, hallucinations, depression, sleeplessness and fear.

The main reason V.C. drank, in his own words, was temptation. He stated that he liked drinking for something to do.

V.C. has been hospitalized in the past due to alcohol abuse and has been through numerous alcohol treatment programs.

At his last session in a treatment facility (his sixth, not including a 10 day stay in a detox centre), he was a member of a group of people from the same community. The reason for this block booking arrangement was to try to get a group of people from the same community sober at the same time so that they could continue to support each other after leaving the treatment facility.

Upon arriving at the treatment facility, V.C. had to be hospitalized because of seizures. During the following 33 days in rehab he was exposed to life skills and to Native culture such as sweats and sweetgrass ceremonies.

Since returning to his community, V.C. has attended AA meetings. In addition, he attended lectures at a Mobile Treatment program where he also participated as an interpreter.

V.C. has remained sober since his last treatment program.

Practice points:

1. In this and similar situations, a community approach to sobriety is more helpful than an individual approach.

2. Incorporating aspects of Native culture into treatment is also helpful.

Case 5

L.M. is a 42 year old Metis from a Northern Saskatchewan village. He has been married for 25 years and has raised 17 children, 3 of them his grandchildren.

He started to use alcohol at the age of 15 and was a weekend drinker. He drank approximately 80 ounces of whiskey on weekends, sometimes drinking during the week as well. Drinking usually took place with his spouse and friends at home and very rarely in a bar or tavern.

L.M. was referred to SADAC by his brother-in-law who is an AA member. L.M. explained to this worker that he would like to go to a rehabilitation centre along with his spouse, because he wanted to quit drinking due to health problems and family disputes. He had tried to quit on his own only to go back to drinking. His spouse also expressed a desire to quit using alcohol because of family disagreements and to support her spouse in his attempt to sober up.

L.M. was booked into a rehabilitation centre with his spouse and 11 other members of his community, some of whom were his cousins and other close relations.

While at the centre his seven year old son drowned, so L.M. and his spouse had to return home. The rest of the group from this community decided not to have a closing ceremony at the alcohol facility but had one at their home village one week after the funeral of L.M.'s son.

The strong support L.M. has received from family, friends and others has been instrumental in his ability to maintain his sobriety despite the tragic death of his son. His relations and friends shared his grief when he lost his son and encouraged him to remain sober, so that he could endure life better. This group of people have been supporting and encouraging each other to remain sober in a settlement with a very high degree of alcoholism. L.M.'s children also continue to encourage their parents to remain sober. In addition, Sister Alice (a Roman Catholic nun) has given L.M. much spiritual, moral and physical support.

Practice point:

This is another example of the importance of a community approach to treatment, where mutual support and encouragement can increase the likelihood of continuing sobriety.

Case 6

S.T. is a 58 year old woman employed as a nurse's aide in a small community hospital. She was referred for treatment through the hospital's Employee Assistance Program after being found under the influence of alcohol while at work.

S.T.'s alcohol use began at the age of 20, and had been a problem for at least 20 years. She reported a predominantly binge drinking pattern, but with frequent daily drinking as well. Drinking was seen

as an attempt to cope with the stresses of daily living. There was no evidence of other drug abuse and no previous treatment. There was also no legal involvement.

S.T. is the youngest child in a sibline of five. Her father died when she was ten. There was no family history of alcoholism or other addiction, but several family members including S.T.'s mother and elder brother had been hospitalized for psychiatric problems. S.T. herself has no psychiatric history.

While in treatment S.T. worked on many issues. She seemed quite open about her alcoholism and by the end of treatment was enthusiastic about recovering. Through her group sharing and written exercises she dealt with her resentment towards her supervisor for forcing her to enter treatment. She also worked on her guilt and resentment over various family issues.

A major issue for her was her tendency to be responsible for other people and to neglect her own needs. She did some work on this while in treatment, and it was recommended that she continue to work on this issue in after-care. After-care plans for S.T. included attending Alcoholics Anonymous and further counselling with her Regional Co-ordinator.

Practice point:

Giving a higher priority to the needs of others than to one's own is common among women and is an issue which should be dealt with during treatment.

Case 7

C.F. is a 60 year old semi-retired financially successful businessman. Problems started after several years of social drinking and continued for the next 12 years, becoming more severe in the last three.

During the last three years he went through two treatment programs with no success and was also hospitalized for five to six weeks for liver damage due to excessive use of alcohol.

Throughout the 12 years of heavy drinking his spouse was very wrapped up in trying to control his drinking and straighten him out. She accompanied him everywhere to protect him because she was fearful that he might harm himself and not be responsible due to his drinking. She was a "people pleaser" who existed to look after him and who never had any plans for her own life. She became very nervous, anxious and upset.

At the urging of the AA and Al-Anon community in their area she came to Regina Rehab Centre after C.F.'s second stint in treatment, feeling that she must have done something wrong and was responsible for the situation. She entered the three-week in-patient program to learn how she was making the situation worse by enabling.

At Regina Rehab she learned some new behaviour and went home with some plans for herself. She stopped being responsible for C.F.'s

behaviour, made plans to do things on her own and refused to have him accompany her if he had been drinking.

C.F.'s daughter was also contacted and came to Regina Rehab for individual counselling. She too changed her behaviour. She let her father know that she loved him and cared for him, but would no longer allow him to endanger the grandchildren. If he had been drinking she would not allow them to travel with him in his vehicle. This was something which hurt deeply because he loved to pick up the grandchildren and take them with him.

After approximately six months of this changed behaviour on the part of C.F.'s spouse and daughter, C.F. came to Regina Rehab and requested treatment. He had also lost his license in this time period and his spouse had refused to be his chauffeur. He had to make the trip by bus to come to ask for help—a very humbling but necessary experience for him.

C.F. entered the three-week live-in program. At the end of these three weeks he was told that he could not be a part of the program for those completing because he still denied the severity of his problem.

It was recommended that he stay for another three weeks in the couples group. He protested that his spouse would not want to do that but was informed that indeed his wife would come to treatment and would arrive shortly. C.F. reluctantly remained in treatment.

Much progress was made with C.F.'s spouse in treatment also. She gave accurate and honest information regarding the severity of his drinking. The denial was worked through. This couple learned to co-operate and deal much more honestly with their lives.

C.F. has remained sober for several years and is very actively involved with AA. His spouse is an active member of Al-Anon. They check back at the Centre quite frequently. Both appear to be happy and enjoying a sober retirement.

Practice point:

This case illustrates the importance of family involvement, for the mutual benefit of the family members as well as the individual with alcohol problems.

Case 8

G.N. is a 70 year old man living in a small town in Saskatchewan who was referred to the Calder Out-Patient Clinic by his physician. G.N. had been admitted to hospital in his home community for treatment of pneumonia. G.N.'s wife had expressed to the physician her concerns about his drinking and his abusive behaviour towards her. These problems had escalated considerably since his retirement.

G.N. was at that point unwilling to consider seeking assistance in his own community but was willing to stay with a friend in Saskatoon for two months and attend programming as an out-patient, along with his wife. During this period of time, G.N. and his wife attended joint

interviews as a couple and individual and group sessions separately from each other.

Goals during this period of time included assisting G.N. to recognize his drinking as a problem, to find options for structuring his time in satisfying ways, to become more communicative with his spouse and to overcome his shame in regard to his drinking.

Goals for his spouse included assisting her to stop enabling G.N., to build some independence for herself in their relationship and to assist her in improving her sense of self-worth. Upon discharge, they were both willing to consider attending AA and Al-Anon in their own community.

Practice point:

It is often necessary to include multiple goals in a treatment program. Concentrating solely on abstinence may overlook key factors which contribute to the drinking problem. Among the elderly these often include loneliness and isolation.

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2 Medical Complications

Nutrition in alcoholism*

Laurence M. Blendis, MD, FRCP(C)
Professor of Medicine, University of Toronto

Since one gram of alcohol provides 7.1 kcal, then 600 mL (20 oz) of 86-proof liquor provides about 1,500 calories, or one-half to two-thirds of the daily caloric requirement. Thus, the physical appearance of the alcoholic showing excess weight and apparent good health may mask significant underlying deficiencies of essential nutrients.

Nutritional assessment

Nutritional deficiency can be assessed in a number of different ways, including:

- percentage of ideal body weight
- various anthropometric measurements such as arm-muscle circumference for skeletal muscle mass and triceps skinfold thickness for fat deposition
- creatinine-height index as an estimate of lean body mass
- measurement of total body nitrogen using capture of neutron activation.

In addition, there are various biochemical markers. However, the circulatory levels of some of the more common ones such as serum albumin and transferrin, pre-albumin or retinol-binding protein may be affected by liver dysfunction as well as malnutrition, thereby causing difficulty in interpretation of the results.

Alcohol as a nutrient

Although ethanol yields 7.1 kcal/g upon complete combustion in a bomb calorimeter, the effectiveness of alcohol as an energy source remains controversial. One study showed that 72 g of absolute ethanol per day was utilized as efficiently as fat or carbohydrate as a source of energy. In contrast, moderate doses of alcohol have been shown to result in thermogenesis and increased oxygen consumption, suggesting inefficient caloric utilization. Furthermore, in other series, excess alcohol intake was associated with weight loss.

Caloric utilization of ethanol may be dose-related. The regular metabolic pathway for alcohol is oxidation via cytosolic alcohol dehydrogenase and cytosolic and mitrochondrial acetaldehyde dehydrogenase coupled to ATP synthesis. With alcohol intake accounting for less than 35% of calories, ethanol may be completely utilized via this pathway. However, at higher intakes, a microsomal ethanol oxidizing system may be involved, with a resultant loss of energy since there is no effective coupling to ATP synthesis. Finally, increased oxygen consumption, especially in the liver, could mean increased

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energy expenditure, especially since the liver contributes about one-half of the total body caloric requirements.

Nutritional assessment

- Assessment of dietary intake
- Anthropometric measurements
  - Arm muscle circumference — skeletal muscle
  - Skinfold thickness — fat stores
- Biochemistry
  - Creatinine/height index — lean body mass
  - Serum albumin — protein status
  - Serum transferrin, pre-albumin
- Intradermal skin testing for anergy — generalized malnutrition
- Tests for specific deficiencies
  - RBC folate
  - Serum vitamin levels
  - Assessment of trace mineral deficiency
- Energy balance — indirect calorimetry compared to dietary caloric intake
- Studies of nitrogen status and metabolism
  - Nitrogen balance
  - Total body nitrogen — capture of neutron activation
  - Labelled amino acid kinetic studies — 13C, 14C leucine

Alcohol component of total caloric intake in North Americans

In a dietary survey of male business executives, ethanol accounted for 5-10% of total calories in a quarter of the subjects and more than 10% in another quarter. In drinkers attending the nine Lipid Research Clinics, alcohol accounted for an average of 11% of calories ingested by men, and 12% ingested by women in the 24 hours prior to the survey.

Does chronic alcoholism lead to protein malnutrition?

The answer to this question probably depends on the population studied, the degree of malnutrition in the population at large, and the effects of alcohol on the patient's diet. For example, in a study of 100 consecutive patients without overt signs of liver disease who were admitted for treatment to an alcoholic treatment center, 36 had normal liver biopsies or minimal changes and, using anthropometric data, no difference was found in this group of patients compared to normal controls. In contrast, in a study of 284 alcoholics who were older (war veterans), 62% had no liver disease but showed some signs of malnutrition. Also, 72% of those with severe alcoholic hepatitis had evidence of both kwashiorkor and marasmus.

Decreased protein intake

In several recent studies, protein intake was lower in patients with significant alcoholic liver disease, yet still above the recommended dietary allowance in most patients. Balance studies have recently shown that chronic alcoholic patients with or without liver disease with a caloric intake of 1,500 to 3,500 calories per day require from 42 to 60 g protein daily (or 0.6 to 0.8 g/kg body weight of protein) to remain in positive nitrogen balance and avoid protein malnutrition. Thus, although severe alcoholic liver disease is associated with decreased nonalcoholic calorie ingestion, in North America, the protein intake does not fall below the basic requirements.

Malabsorption

Alcoholism does cause malabsorption, but only uncommonly, since it is usually due to end-stage alcoholic disease. For example, prolonged or recurrent superficial gastritis can result in chronic atrophic gastritis with hypochlorhydria. This normally results in malabsorption of food iron yet, paradoxically, in the absence of chronic blood loss, chronic alcoholics often have increased iron deposition in the liver.

Alcohol may cause microscopic abnormalities of the jejunal mucosa, resulting in minor decreases in absorption of amino acids, for example. More importantly, the development of chronic pancreatitis, with lipase deficiency, and cirrhosis, with bile deficiency, will result in fat malabsorption and steatorrhea.

Increased catabolism

Chronic alcoholism, with excessive alcoholic intake, may result in excessive energy expenditure. In addition, studies of amino acid metabolism have demonstrated increased amino acid turnover in patients with alcoholic liver disease. Indeed, careful studies have shown that the metabolic patterns in alcoholic cirrhotics after an overnight fast resemble those of normal humans after three days of starvation. Thus, they develop the catabolic state of starvation more rapidly than normal. It may well be that this is a major cause of weight loss or loss of lean body mass in such patients.

Fat ingestion and steatosis

Steatosis is the initial and commonest hepatic abnormality in chronic alcoholics. Although the etiology of steatosis is almost certainly multifactorial, the role of dietary fat is clearly important. In animal studies in which rats were fed a liquid diet consisting of 25% fat, ad libitum, hepatic triglyceride levels were normal. When the fat content was increased to 35%, steatosis was produced after 4 weeks, with the fat content of the hepatocytes reflecting the particular types of fat in the diet. Maintenance of the diet for up to 6 months did not result in any progression of the disease.

Also, rats fed only 5% of total calories as fat continuously via a gastric tube developed steatosis. Furthermore, when the rats were fed 25% of total calories as fat via this method, they developed zone 3 necrosis and terminal hepatic vein fibrosis with bridging.

In addition to the amount of fat ingested, the type of fat may also be important in the pathogenesis of steatosis and the more severe forms of liver damage. Recent epidemiologic studies have suggested that diets high in cholesterol and saturated fat may protect against the development of alcoholic cirrhosis, and diets high in polyunsaturated fats may promote alcoholic cirrhosis. If lipid peroxidation proves to be involved in the pathogenesis of alcoholic liver injury, then these studies support the observation that an increased ratio of dietary polyunsaturated to saturated fatty acids enhances lipid peroxidation. Furthermore, diets rich in cholesterol may have a stabilizing effect on cell membranes, rendering them more resistant to the effect of alcohol.

Carbohydrate abnormalities

Hypoglycemia: occasionally, an alcoholic binge may cause hypoglycemia. This may be precipitated by previous gastric resection, with rapid absorption of alcohol from the upper small intestine and a rapid insulin response, and decreased gluconeogenesis due to glycogen depletion secondary to hepatocyte dysfunction and a reduced liver cell mass. In an alcoholic patient, acute hypoglycemia may more readily precipitate a seizure due to focal neurologic damage secondary to chronic alcoholism.

Hyperglycemia: up to 70% of alcoholic cirrhotic patients may have carbohydrate intolerance, and 10-30% may be frankly diabetic. The diabetes appears to be similar to noninsulin-dependent diabetes mellitus, with high circulating insulin levels and evidence of insulin resistance. The pathogenesis of hepatogenic diabetes is multifactorial. Treatment includes standard dietary counselling, with carbohydrate restriction plus insulin if required.

Nutritional support in alcoholic hepatitis (AH)

Malnutrition in patients with AH is multifactorial. Since these patients are often anorexic, nauseated or simply incapable of feeding themselves, nutritional assistance may be required.

Enteral feeding

Since patients with AH have a tendency to retain fluid or become encephalopathic, the formulation of enteric feeds is important. A formula feed consisting of 15% of calories as protein, 50% carbohydrate and 35% fat supplies 1,580 calories per liter. This formula, given for up to four weeks, prevents complications, improves appetite, and increases serum albumin. In a more recent study, patients with AH tolerated 80 g of protein per day, and achieved positive nitrogen balance without exacerbation of encephalopathy.

Parenteral feeding

Despite the fear of inducing portal-systemic encephalopathy (PSE), peripheral parenteral nutrition has been carried out in small groups of AH patients, providing 50 to 75 g of protein daily in 2 liters of fluid without complications. In one trial of 35 AH patients receiving 100 g

of protein daily in two forms of amino acid solution (low and high concentrations of branched-chain amino acids), none developed PSE.

In another study in which oral feeding was supplemented with either enteral or intravenous calories plus 10 g of protein, either in conventional form or with branched-chain amino acids, positive nitrogen balance was achieved, but the nutritional therapy had no effect on mortality.

Nutritional intervention in alcoholic liver disease

Condition	Management
• Alcoholic hepatitis	Enteral feeding Total parenteral nutrition
• Ascites	Salt and water restriction
• Portal-systemic encephalopathy	Protein restriction or vegetable protein (high fiber; BCAA supplements?)
• Hepatogenous diabetes	Carbohydrate restriction
• Malabsorption	Vitamins A and D Calcium supplements
• Dietary deficiency	Multivitamins or thiamine Pyridoxine and folate if required

BCAA = branched-chain amino acids

Nutritional intervention in alcoholic liver disease

Portal-systemic encephalopathy (PSE)

Protein restriction: the pathogenesis of PSE remains unknown. However, the basis of almost every theory involves nitrogen metabolism, particularly in the gut. Increased protein intake can result in a deterioration in PSE, whilst protein restriction is the cornerstone of therapy. Usually, protein intake can be maintained at 40 g daily, with the addition of medical therapy such as lactulose or neomycin. However, occasionally, patients remain clearly symptomatic on this diet.

Vegetable protein: in an effort to prevent further harmful protein restriction, alternative dietary therapy has been investigated. At least three controlled trials have shown some benefit of vegetable over animal protein, but not all studies have confirmed this. The mechanism for the improved effect of vegetable protein appears to be partly an increase in fecal nitrogen excretion, most of which is due to bacteria, and improved nitrogen metabolism. The role of the higher fiber content *per se* in vegetarian diets has not yet been evaluated.

Branched-chain amino acids: the role of so-called false neurotransmitters in the pathogenesis of PSE remains controversial. However, this has not prevented the determined use of branched-chain amino acids (BCAA) in PSE in an effort to normalize the deficiency of these amino acid levels in plasma. Theoretically, by competitively inhibiting the aromatic amino acids, principally phenylalanine, with BCAA, the formation of false neurotransmitters in the brain will be prevented. Up until now, at least seven controlled trials have been performed using IV BCAA-enriched solutions in acute PSE, and a similar number using an oral preparation of BCAA in chronic PSE. However, no firm conclusions have been reached regarding efficacy, suggesting, at best, minimal benefit for very expensive nutritional therapy.

Cirrhosis with ascites

Since cirrhosis is a condition with a prognosis, in many cases, of at least 10 years of life, total parenteral nutrition (TPN) does not provide a convenient solution to the nutritional problems, even in patients with ascites, who are among those with the worst cases of malnutrition. In contrast, enteric nutrition was well tolerated in ten such patients who were treated with a low-sodium, high-calorie diet which initially supplied 40 g of protein per day for several weeks. Improvements occurred in serum albumin levels, rising from 27 to 34 g/L, in serum transferrin levels, creatinine/height ratio, and in anthropometric measurements. Six of the patients tolerated increases in protein to 80 g and even 140 g per day!

In patients with refractive ascites undergoing peritoneovenous shunting, the lean body mass as measured by total body nitrogen (TBN) was initially significantly reduced. At three months and twelve months after successful implantation of the shunts, the patients appeared to be better nourished, with significant increases in TBN and a positive nitrogen balance. This was only partially due to an increase in calories from a nonalcohol source.

Fat-soluble vitamins

Vitamin A: carotene, the provitamin, or precursor, of vitamin A, is found in fruit, vegetables and dairy products. These foods may be absent from an alcoholic's diet, and the deficiency is exacerbated by fat malabsorption. Low vitamin A levels have been found in the liver of chronic alcoholics, especially those with liver disease, even in the presence of normal serum vitamin A and retinol-binding protein concentrations.

Effects of A vitamin deficiency include:

- defective spermatogenesis
- xerophthalmia
- poor visual adaption to darkness.

Vitamin A, 25,000-50,000 units daily, will restore levels to normal and reverse the symptoms of xerophthalmia, but will not reverse a defect in dark adaption, which may occur only after the addition of oral zinc therapy.

Vitamin D and osteopenia: osteopenia is more common in chronic alcoholics than the population at large. Contributing factors include:

- a diet deficient in calcium, principally found in dairy products and certain green vegetables
- dietary deficiency of vitamin D found principally in fish oils
- a deficiency of sunlight (absorbed through the skin).

Steatorrhea is another cause, resulting in malabsorption of both calcium and vitamin D (in the form of cholecalciferol). In addition, the presence of liver disease may result in defective 25-hydroxylation of vitamin D in the liver, preventing further conversion to the active form, 1,25 dihydroxy D. However, the predominant cause of osteopenia is osteoporosis, which may be exacerbated by inactivity in male alcoholics, and by the postmenopause phase in female alcoholics.

Treatment consists of a high-calcium diet, using dairy products as the principal form of natural calcium, and calcium supplementation of up to 1 g of elemental calcium daily. In addition, vitamin D may be given in the form of a multivitamin.

Vitamin E: low vitamin E levels have been described in chronic alcoholics in association with low levels of blood selenium. This combination could lead to increased lipid peroxidation through the loss of selenium-dependent glutathione peroxidase and a decrease in lipid-soluble antioxidants. The best clinical correlate of vitamin E deficiency is a neurological defect found in patients with chronic cholestasis. This has not been described in chronic alcoholics. However, rarely, an alcoholic patient may present with severe anemia associated with marked acanthocytosis of the red blood cells. In such patients, therapy with vitamin E is worth trying.

Water-soluble vitamins

Thiamine: thiamine deficiency in chronic alcoholics has long been known to be associated with Wernicke-Korsakoff syndrome, peripheral neuropathy and high-output cardiac failure. The recommended daily intake is 0.5 mg/1,000 kcal, but alcoholic patients may consume less than half of this. There are several causes of thiamine deficiency in chronic alcoholics. The diagnosis is usually suggested clinically, and confirmed by measurement of decreased red cell transketolase activity. Acute therapy is with thiamine, 50-100 mg daily, whilst with chronic therapy it can be given in multivitamin B complex.

Pyridoxine deficiency: pyridoxine is converted to the biologically active form of vitamin B_6, pyridoxal-5-phosphate (PLP), in erythrocytes and hepatocytes. Low levels of both pyridoxine and PLP are commonly found in chronic alcoholics. PLP has a key role in transamination and heme synthesis and, in alcoholics, its deficiency has been implicated in the pathogenesis of both peripheral neuropathy and sideroblastic anemia. Treatment is with multivitamin B complex and a normal diet.

Folate deficiency, with low serum and red cell folate levels, has been suggested as the major cause of macrocytic anemia of chronic

alcoholics, yet has been found in only one-third of patients. The reasons for folate deficiency in these patients include:

- decreased intake
- malabsorption
- reduced hepatic conversion of dehydrofolate to the active form, tetrahydrofolate
- decreased saturation of folate-binding protein, with increased urinary folate excretion.

The treatment is a well-balanced diet with fruit and green vegetables, or 5 mg of folic acid weekly.

Trace metals

Zinc: although the presence of zinc deficiency is not yet firmly established, it probably does occur in chronic alcoholism, especially in patients with liver disease. The diagnosis is difficult because serum zinc levels correlate poorly with tissue zinc concentrations. However, studies with both hair zinc and leukocyte zinc concentrations confirm zinc deficiency in some patients. One factor causing this is low dietary zinc (mostly found in animal proteins). In addition, there may be a decrease in protein binding of zinc in plasma due to low albumin concentrations, and an increased loss via urinary zinc excretion.

Experimental zinc deficiency results in low vitamin A levels due to defective hepatic production of retinol-binding protein by alcohol dehydrogenase. Zinc supplementation results in increases in vitamin A levels. In alcoholic patients with defective adaption to darkness that is resistant to vitamin A therapy, zinc supplementation may result in improved vision, with decreased dark-adaption thresholds. Secondly, zinc deficiency can result in loss of taste acuity, aggravating poor dietary intake.

Zinc deficiency can be corrected naturally with a high-protein diet or zinc supplementation, for example, with zinc sulphate or histidine tablets, 10 mg of elemental zinc daily.

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Alcohol and the Liver

Murray I. Larsen, M.D., F.R.C.P.(C)
Gastroenterologist, Regina

Alcohol has been known to have an adverse effect on the liver since classical times. However, despite this, the precise mechanisms of alcohol damage to the liver are, as yet, poorly understood. Epidemiologically, there appears to be a definite genetic pre-determination to develop liver disease from alcohol intake. Only a minority of patients who drink very large amounts of alcohol ever develop chronic liver disease, whereas a small group of patients will develop rather severe liver disease from only modest alcohol intake.

Men start to develop an increased risk of alcoholic liver disease when they consume more than an average of forty grams of alcohol per day. Levels of intake higher than twenty grams per average day result in an increased risk of alcoholic liver disease for women.

Most patients who drink significant amounts of alcohol will get biochemical changes within the hepatocytes, which will manifest as benign fatty infiltration of the liver. This results in no clinical symptoms, often in slight elevations of AST and ALT and macrovesicular fat vacuoles within the hepatocytes on liver biopsy. Liver function is preserved, and this lesion does not appear to advance to chronic liver disease. The fatty infiltration of the liver is related to the metabolism of alcohol to acetyl-CoA, which is then used to produce free fatty acids and ketones, which are then incorporated into triglycerides. Fatty infiltration of the liver is also commonly associated with type IV hyperlipidemia.

A minority of patients with heavy continuous alcohol intake will develop alcoholic hepatitis. Alcoholic hepatitis results when the alcohol intake causes destruction of liver cells and a significant inflammatory response. On liver biopsy, one sees a lot of polymorphonuclear leukocyte infiltration and collapse of the cytoskeleton of hepatocytes into Mallory-hyaline bodies. There is also a lot of associated fatty infiltration.

Alcoholic hepatitis is the pre-cirrhotic lesion and if it continues, fibrosis and micronodular cirrhosis develop. Clinically, alcoholic hepatitis has few symptoms, although nausea may be prominent. Jaundice is a relatively late finding with alcoholic hepatitis and is a bad prognostic sign when it develops. Biochemically, alcoholic hepatitis is somewhat of a misnomer in that the AST and ALT are usually not as elevated as one would expect with viral hepatitis. Indeed, the AST should never be greater than 500 if the diagnosis is alcoholic hepatitis. The ALT is often 50 percent of the AST. Alkaline phosphatase will sometimes be quite elevated, as alcoholic hepatitis tends to be quite a cholestatic syndrome.

As drinking continues, the fibrosis worsens and liver cell function starts to deteriorate. This is manifest by portal hypertension with

development of esophageal varices and increasing risk of GI bleeding, sodium retention with ascites and peripheral edema and hepatic encephalopathy and increasing jaundice.

Assessment of liver function

The clinical assessment of liver function depends on careful clinical examination and simple readily available laboratory evaluation.

The clinical findings one sees in patients with alcoholic liver disease are palmar erythema, leukonychia, rarely clubbing, Dupuytren's contractures, proximal muscle wasting, parotid enlargement, facial telangiectasia, jaundice, gynecomastia, spider angiomata, testicular atrophy, splenomegaly, ascites and peripheral edema, and signs of hepatic encephalopathy.

To assess the liver function biochemically, one must think of the function of the liver. The liver produces most of the proteins within the bloodstream, including the coagulation proteins. The half-life of Factors VII, X, IX and II are measured in hours so that sudden changes in hepatic function will result in rapid prolongation of prothrombin time. The prothrombin time gives a moment-to-moment assessment of liver function and is the best test for following the day-to-day function of a patient with liver disease. Albumin is also made by the liver but has a much longer half-life of approximately twenty-one days, so that the serum albumin gives a good estimate of the long-term liver function. A patient with chronic liver disease would be expected to have both a prolonged PT and a depressed albumin, whereas a patient with acute liver disease would be expected to have a prolonged PT and a normal albumin. Bilirubin level is also an indicator of liver function, although one can have good liver function with a very high bilirubin in patients with cholestatic syndromes. Finally, the metabolism of nitrogenous substances is the liver's function. Disruption of this function manifests as hepatic encephalopathy, which is best assessed clinically although the lab can help somewhat with the assessment of the serum ammonia.

The hepatic biochemistry (alkaline phosphatase, AST, ALT and gamma GT) gives no information of hepatic function and is a poor indicator of prognosis. It does, however, give valuable clinical information regarding the etiology of hepatic diseases. In alcoholic liver disease, the alkaline phosphatase is often significantly elevated out of proportion to the AST and ALT. The AST is essentially never greater than 500 with pure alcoholic liver disease and the ALT is often 50 percent of the AST. Gamma GT is often very significantly elevated, as it is a cytochrome enzyme which is induced by alcohol.

Hepatic encephalopathy

Hepatic encephalopathy is an indication of significant hepatic dysfunction, usually coupled with portosystemic shunting. Early signs of hepatic encephalopathy are usually subtle psychometric changes in function and difficulty sleeping at night, associated with a slight drowsiness during the day. There are usually no overt clinical findings at

this time. As the encephalopathy becomes worse, the patient starts to develop asterixis. Asterixis is defined as a momentary loss of posture which one sees primarily in the hands or on the head and tongue. The patient momentarily drops his or her hands and then returns them back to position, giving the impression of a flapping type tremor. As encephalopathy worsens, the patient becomes overtly drowsy and will often have major personality changes, such as combativeness and obnoxiousness, but is usually still orientated. The patient, as encephalopathy worsens, slips into unconsciousness. At this level, almost any neurological finding can be seen. Plantars may be upgoing and the patient may have decorticate or decerebrate posturing.

The pathogenesis of hepatic encephalopathy is also not well understood; however, it is clearly related in some way to nitrogenous substances produced in the gastrointestinal tract reaching the central nervous system. Clearing the gut of nitrogenous substances, killing of the bacteria that produce nitrogenous substances from protein substrates and acidification of the intestinal lumen results in improvement of hepatic encephalopathy in almost all patients.

An otherwise stable cirrhotic patient will develop hepatic encephalopathy if he or she has a sudden protein load such as related to a high-protein meal, constipation or an upper GI bleed. They will also develop hepatic encephalopathy if they develop deterioration of hepatic function, such as will occur in sepsis, another episode of alcoholic hepatitis or the development of a hepatoma. Finally, metabolic alkalosis, secondary to a diuresis for sodium retention, can also precipitate hepatic encephalopathy.

When a patient with chronic alcoholic cirrhosis presents with a marked increase in hepatic encephalopathy, one must first try to decide the etiology of the sudden deterioration. If there is any GI bleeding present, it should be controlled, particularly with esophageal sclerotherapy. Electrolyte disturbance should be treated, sepsis should be looked for and aggressively treated and the bowel cleared with high tap-water enemas.

Lactulose has become the drug of choice for the treatment of hepatic encephalopathy. Lactulose is a non-absorbable sugar which reaches the colon and is metabolized by colonic bacteria to short-chain fatty acids. This results in acidification of the colonic lumen and is an osmotic catharsis. However, it is not necessary to produce diarrhea in order to have a good therapeutic effect. Acidification of the colonic lumen converts nitrogenous substances to their positively charged ions, which prevents their diffusion into the portal blood and, hence, to the CNS. Neomycin, which kills the bacteria responsible for the conversion of protein substrates to nitrogenous molecules, is also a tried, true and effective therapy for hepatic encephalopathy. There is some absorption of Neomycin and there has been concern regarding nephrotoxicity, so its use is secondary to that of lactulose. Finally, Metronidazole has recently been shown in control trial to be quite effective in treating hepatic encephalopathy, apparently also by

diminishing colonic bacteria. It has the advantage of being able to be given intravenously to a comatose patient who cannot swallow. Therefore, in someone with deep hepatic encephalopathy who is too sleepy to swallow medications and who has no overt GI bleeding, one would treat with high tap-water enemas until clear, followed by lactulose enemas, such as 100 cc of lactulose and 200 cc of water q.6.h. and intravenous Metronidazole in a dose of 500 mg IV q.8.h. Oral lactulose would then be started when the patient is alert. NG tubes should generally be avoided in patients with hepatic encephalopathy secondary to chronic liver disease, as they may increase the risk of bleeding from esophageal varices.

Because of the complex medical problems that patients in hepatic encephalopathy often develop, all of these patients should be managed in an intensive care unit setting, preferably with a gastroenterologist either in consultation or assuming primary care.

Ascites

Treatment of ascites and edema states in cirrhotics has undergone radical change in recent years. It was classic teaching that diuresis for ascites must be very cautious and slow and weight loss should not exceed 500 grams per day. However, it has become clear in recent work that if the patient has peripheral edema, one can be much more aggressive with diuresis. In general, Aldactone is the drug of choice starting at a dose of 50 mg per day and increasing the dose up to 200 mg per day. Lasix in small doses is often then added, starting again at 20 mg per day and slowly increasing. Lasix appears to be more effective if it is given as a single a.m. dose. Again, because of the potential for significant electrolyte disorder, the patient should be admitted to hospital for the initial treatment of ascites.

Other recent work has shown that paracentesis is, in fact, an acceptable therapy in ascites related to chronic liver disease and that if the patient receives simultaneous infusion of albumin, the risk of azotemia and oliguria is very low. This, of course, requires careful monitoring of the patient's fluid balance in hospital.

GI bleeding

GI bleeding is a common problem in patients with chronic alcoholic liver disease. Approximately 60 percent of patients with chronic cirrhosis and upper GI bleeding bleed from esophageal varices and the other 40 percent bleed from a peptic ulcer — either gastric or duodenal.

The management of GI bleeding in patients with chronic alcohol abuse is different from that in the non-alcoholic patient.

Patients with GI bleeding are often very unstable and should certainly be managed in an intensive care unit setting. They will often require many units of blood and plasma and careful monitoring of coagulation factors.

Endoscopy plays a vital role in the diagnosis and management of upper GI bleeding in patients with cirrhosis. This group of patients should be endoscoped as soon as possible by an endoscopist experienced in the techniques of esophageal sclerotherapy. Esophageal sclerotherapy was originally developed in the early 1950's as a treatment for bleeding esophageal varices, and since the development of flexible fibre-optic instruments, has quickly become the treatment of choice for all patients with bleeding secondary to esophageal varices. Immediate urgent sclerotherapy at the time of bleeding is highly effective in controlling bleeding, and multiple treatments with sclerotherapy will result in obliteration of varices and, thereby, markedly decrease the incidence of re-bleed. Vasopressin and Blakemore tubes have a secondary role in the treatment of bleeding esophageal varices and are now rarely used.

Summary

Patients with alcoholic liver disease present many challenges. Besides their multiple, complex and often difficult to manage medical problems, the most important aspect of their therapy is to stop drinking. Patients with alcoholic cirrhosis can improve their prognosis significantly by abstaining from alcohol.

Alcohol Neurotoxicity

C.P.V. Nair, M.R.C.P.(ED), F.R.C.P.(C)
Neurologist, Regina

Intoxication: Ethanol crosses the blood-brain barrier without any significant limitation and achieves a brain concentration identical to that of ethanol in the blood. Chronic alcoholics can tolerate a higher alcohol level than non-alcoholics because of tolerance and adaptation.

Symptoms and signs of acute ethanol intoxication are due to cerebral depression, possibly initially of reticular formation causing cerebral disinhibition and later the cortex itself. Table I gives a rough correlation between clinical states and blood ethanol concentration (BEC) in non-alcoholics.

Table I

BEC in mmol/L	Symptom
5 - 15	Impaired motor co-ordination, sensory perception and cognitive function.
10 - 15	Signs of intoxication (impaired social inhibition, euphoria, argumentativeness, ataxia nystagmus).
65	Stupor.
90 - 100	Coma, respiratory paralysis.

Alcohol withdrawal syndrome: Chronic alcoholics are physically dependent on ethanol and usually develop withdrawal symptoms about eight hours after the last drink (Table II).

Table II

Alcohol Withdrawal Symptoms

8 hours	Onset of tremor.
12 - 24 hours	Hallucinations, generalized tonic-clonic seizures.
2 - 5 days	Delirium tremens.

Withdrawal seizures: Usually multiple and non-focal, rarely go into status epilepticus. Most occur during the first 24 hours. The EEG in uncomplicated withdrawal seizures is normal. Seizures occurring after 24 hours of stopping drinking are due to other causes. Since alcoholics are apt to be lost for follow-up investigations, EEG and CT should be undertaken to exclude conditions like subdural hematomas. Anticonvulsants on a long term basis are not necessary.

Delirium tremens: Manifested by profound confusion, delusions, hallucinations, agitation, tremor and sympathetic over-activity like tachycardia and fever.

Ethanol-related neurologic disorders: Many alcoholics develop one or more of these complications. They do not appear to be due to the direct toxic effect of ethanol on the nervous system, but to nutritional deficiencies.

Wernicke's encephalopathy: Characterized by nystagmus, sixth cranial nerve paralysis, ataxia and confusion. Coma rarely occurs. There is evidence that this is due to thiamine deficiency.

Korsakoff syndrome: Even though pathological findings in Wernicke's encephalopathy and Korsakoff syndrome are the same, clinical signs are different. The main features are defective recall of stored memory (retrograde amnesia) and inability to establish new memories (anterograde amnesia). Many patients with this amnesic syndrome have had previous episodes of Wernicke's encephalopathy.

Alcoholic dementia: A controversial diagnosis. Mild dementia may occur but there is not always a correlation with CT appearance of cerebral atrophy. Profound dementia is not a feature of alcoholism.

Alcoholic cerebellar degeneration: Characterized pathologically by degeneration of the superior vermis of the cerebellum and ataxia during walking (trunkal ataxia). Recovery rates are poor.

Alcoholic peripheral neuropathy: Pressure palsies like radial nerve palsies occur frequently due to alcohol-induced deep sleep. Generalized neuropathy is more common in women. Typical findings of peripheral neuropathy are noted, but burning pain and heat sensation on the plantar surfaces of the feet are extremely uncomfortable. Deficiency of B-complex vitamins is considered to be the cause by many, but the direct toxic effect of alcohol is also likely to be present.

Myopathy: Both acute and subacute myopathy occur in heavy drinking alcoholics. Acute myopathy sometimes is confined to one limb and may simulate a deep vein thrombosis.

Central pontine myelinolysis: Usually occurs in alcoholics who are seriously ill with some form of ethanol-induced encephalopathy. Rapid onset of spastic or flaccid quadraplegia develops. It is now shown that rapid and over correction of hyponatraemia is important in the pathogenesis of this condition.

Relation of Alcohol to Anemia and Thrombocytopenia

L.K. Moore, M.D., F.R.C.P.(C)
Internal Medicine and Hematology, Regina

Chronic alcoholism is often associated with anemia. There are four main causes of the anemia:

1) nutritional,
2) a result of chronic gastrointestinal bleeding,
3) secondary to hepatic dysfunction,
4) or a direct toxic effect of alcohol on erythropoiesis.

Quite commonly all these factors work together to produce the anemia.

Megaloblastic anemia occurs almost exclusively in alcoholics who have been eating poorly. It is seen more commonly in heavy drinkers of wine and whiskey, substances which contain little or no folate, than in drinkers of beer, a rich source of the vitamin. Although decreased dietary folate intake appears to be a necessary factor in the etiology of the megaloblastic anemia, ethanol itself interferes with folate metabolism.

Iron deficiency, usually due to chronic gastrointestinal tract bleeding, is often associated with folate deficiency. In patients with both nutritional deficiencies the blood film will be "dimorphic" with macrocytosis, hypersegmented neutrophils and hypochromic microcytes.

Macrocytosis is common in chronic alcoholics. It may be associated alone, with megaloblastic anemia or in a combination with ringed sideroblasts in approximately 40% of all patients. Macrocytosis in alcoholics may be due to one of at least four causes:

1) folate deficiency, with hypersegmentation of the neutrophils,
2) reticulocytosis, usually as a consequence of hemolysis, gastrointestinal hemorrhage or ethanol withdrawal,
3) the macrocytosis of liver disease,
4) the macrocytosis of alcoholism.

In the latter the degree of macrocytosis is usually mild, with MCV in the 100 to 110 range. As many as 90% of chronic alcoholics will exhibit this macrocytosis which is unrelated to the presence of liver disease or folate deficiency. Anemia is usually absent. The macrocytosis persists until the patient stops drinking. Even then, the MCV does not become completely normal for periods of two to four months.

Thrombocytopenia is commonly seen in patients with chronic alcoholism. The cause has not been definitely established. Most studies suggest that alcohol acts to suppress platelet production. Reduction in platelet life span may also contribute to lowering of platelet levels.

Thrombocytopenia may occur alone as a direct toxic effect of alcohol or with the accompanying folate deficiency of megaloblastic

anemia or it may be due to hypersplenism associated with splenomegaly. Platelet counts as low as 15,000 per cubic millimeter have been recorded. Following withdrawal of alcohol, platelet levels usually return to normal within 7-21 days and may become markedly elevated in some patients. Thrombocytosis may also occur following withdrawal of alcohol from patients who are not thrombocytopenic at the time of hospital admission. Alcohol may also induce platelet dysfunction by several mechanisms.

Alcohol and the Heart

Naiyer Habib, MBBS, MD, FRCP(C), FCCP, FACP, FACC

Clinical Associate Professor of Medicine
(Cardiology), University of Saskatchewan

Alcohol affects the heart in various ways. Some of these are well established and some are controversial. Alcohol drinking is common in Western society. Two-thirds of adults use alcohol in one form or another; 10% of them are heavy drinkers.[1] Two percent to 6% of females drink two or more drinks per day.[2] Hence a significant number of people will have effects on their heart. Besides, the fetuses and infants of drinking mothers will be affected.

Alcohol is known to be implicated in causing Heart Muscle Disease (cardiomyopathy), arrhythmia, sudden death and hypertension. The effect on the incidence of coronary artery disease depends on the quantity of ingestion.

Alcohol affects the fetus of the drinking mother even with an intake considered to be the norm in the society.

Alcohol and heart muscle

Alcohol causes acute as well as chronic depression of myocardial contractility. Cardiac dysfunction may be demonstrated in normal individuals in quantities consumed in social drinking.[3] Smaller amounts of alcohol cause cardiac dysfunction in normal subjects compared to the amount needed to produce the same effect in the chronic alcoholic without known heart disease. On the other hand, alcoholic persons with clinically evident cardiac dysfunction are more susceptible than normal.[4] Prior exposure to alcohol appears to modulate hemodynamic exposure to acute challenge with alcohol. Acute hemodynamic effect is level dependent. It is reversible, e.g. with hemodialysis.[4]

Chronic alcoholism is an established cause of cardiomyopathy. It is reversible up to a certain limit of time depending on how much permanent damage has already occurred. Cessation of alcohol drinking may halt progression of damage.

Alcohol has a damaging effect on heart muscle as a result of its direct toxic effect by causing nutritional deficiency (e.g. thiamine deficiency), and due to the toxic effect of additives (e.g. cobalt).[5,6]

Cardiomyopathy due to alcoholism leads to congestive heart failure, manifest as arrhythmia, even as sudden death. Acute alcohol intake may lead to sudden death.[7]

Alcohol and hypertension

Alcohol is one of the causes of hypertension. It is reversible[8] unless permanent damage has already occurred to target organs. Even a

small amount of alcohol may raise blood pressure. Larger amounts of alcohol intake may cause a significant number of cases of hypertension. A drink of one or two ounces of alcohol a day causes an increase in blood pressure;[9] a drink of less than one ounce of ethanol per day does not cause an increase in the prevalence of hypertension.[8] Some have found a linear increase in blood pressure with a progressive increase in alcohol intake.[9]

The pressure effect of alcohol primarily reflects an increase in cardiac output and heart rate secondary to rapid rise in plasma epinephrine and cortisol levels and a slower rise of norepinephrine, as noted in young men with light to moderate drinking habits.[10] In animals ethanol increases intracellular calcium by affecting the sodium-potassium pump.[11]

Alcohol and coronary artery disease

Heavy drinking is associated with an increase in mortality due to coronary artery disease. Some suggest that moderate alcohol intake reduces mortality due to coronary artery disease. The Framingham Study[12] arrived at a figure of 0.7 as the relative risk factor of those drinking 30 or more ounces of ethanol per month compared to those drinking less than this. Chicago Western Electric Study[13] showed an insignificant relationship between moderate use of alcohol and coronary artery disease mortality. A moderate amount of alcohol consumption of 0.5 to 1 ounce of ethanol per day may cause fewer coronary events.[14] Some protection from coronary artery disease is claimed in those who drink alcohol in moderate amounts (one ounce per day) in a consistent manner and not in binges.[15] Alcohol increases HDL which may be a factor for protection from coronary artery disease in the moderate drinker of alcohol. The heavy drinker of alcohol has an increased incidence of coronary artery disease.[16]

Alcohol and the fetus

Alcohol affects the fetus in mothers consuming alcohol. Fetal alcohol syndrome is characterized by microcephaly, microganthia, microophthalmia, prenatal growth retardation, developmental delay and cardiac defect.[17] Fetal alcohol syndrome occurs in 1 in 300 to 1 in 2,000 live births. It occurs in 30% to 40% of infants of alcoholic mothers,[18] especially those who smoke marijuana. Approximately 29% of offspring with fetal alcohol syndrome have congenital cardiac defects, e.g. atrial septal defect, ventricular septal defect, tetralogy of Fallot[18,19] (the most common ventricular septal defect).

Fetal alcohol syndrome sometimes occurs even at a level of ethanol intake well within the norm for a large number of people in the society. Such level of intake by a mother may have a devastating effect on the fetus but may not have such an effect on the mother.[18]

Malformation of the fetus appears to be due to a very complex mechanism of interaction between genetic and environmental factors[17] — alcohol being one factor in drinking mothers.

In conclusion, alcohol affects heart muscle, blood pressure, coronary artery and the fetus.

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The Carbohydrate Alcohol Syndromes
A review of hypoglycemia and alcoholism with and without liver disease*

Saul Cohen, M.D.

Hypoglycemic states have been recognized since 1849 when Claude Bernard[1] first discovered that the mobilization of liver glycogen is a source of blood sugar. In 1941, Brown and Harvey[2] described hypoglycemia following the drinking of denatured alcohol solvents in six chronic alcoholics from the Baltimore area. Since that time, over a hundred instances of alcoholism associated with hypoglycemia have been reported with the majority of the accounts appearing in the foreign literature.[3,4,5,6,7,9] Among these cases are well-documented instances of pediatric hypoglycemia which indicate that addiction of chronic alcoholism is not mandatory, alcohol hypoglycemia having been reported in children on an adequate diet.

One of the most recent works determining the cause of post-alcohol hypoglycemia has been carried out by Meame and Jourbet.[9] During a ten month period they studied 23 South Africans with spontaneous hypoglycemia after excessive alcohol ingestion. They recognized this as the most common cause of spontaneous hypoglycemia among South African adults. Most of the patients were sporadic drinkers with poor diets whose liver biopsies did not demonstrate cirrhosis. They concluded that three factors were probably important in the production of hypoglycemia:

1. a preceding period of inadequate food intake,
2. an increased utilization of glycogen storage during metabolism of alcohol,
3. a decreased glycogen synthesis during utilization of these stores.

They suggested the failure of glyconeogenesis resulted from a temporary dysfunction of the hepatic cells.

R. Head, reporting on Clinical Studies in Chronic Alcoholism in the Acta Medical, Scandinavia, 1958[7] studied 51 chronic alcoholics and found no relationship between blood alcohol content and blood glucose levels. He felt that it must be an inherent abnormality of carbohydrate metabolism in that in many of these cases hypoglycemia is precipitated by the combination of acute alcoholism and inadequate diet. He also noted an incidence of approximately 16 percent of Frank Diabetes as shown by diabetic glucose tolerance curves among his cirrhotic patients.

More recent papers published by Freinkel-Singer-Arky, *et al.* in the Journal of Clinical Investigation, 1963[10] demonstrated that alcohol

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hypoglycemia constitutes a specific clinical syndrome. They felt that alcohol hypoglycemia must be classified as a form of exogenous hypoglycemia arising after the interruption of fasting equilibrium by alcohol and is especially likely to occur in those subjects in whom the endogenous balance between glucose production and glucose utilization is already precarious. The precise aspect of alcohol metabolism that leads to alcohol hypoglycemia remains to be elucidated.

A recent paper published in Nutrition Reports International, November, 1973, Vol. 8, No. 5, published by McLaughlan, Noel and Moodie[11] pointed out that a combination of low-carbohydrate diet and alcohol is likely to produce hypoglycemia. They stated the combination of three variables: *exercise*, *alcohol* and *a low carbohydrate diet* would likely produce a dangerous state of hypoglycemia and pointed out that in view of the large number of persons who are adhering to low carbohydrate reducing diets in the "Seventies" it is of great importance to ascertain the safe level of dietary carbohydrate necessary to prevent hypoglycemia that may be induced by ethanol and/or exercise.

interest in hypoglycemia at alcoholism treatment centres in Saskatchewan, both in Regina and Saskatoon, became more marked when we noticed that we were dealing with several types of hypoglycemia occurring with and without disturbances of liver function tests at various stages in the recovery period of the alcoholic patient.

Category I: Unfed state hypoglycemias with disturbed liver function tests

These groups of hypoglycemias that we encountered were associated with:

(1) Acute Alcoholism
(2) An Inadequate Diet
(3) Impaired Hepatic Function Tests

Group A

An example of this type of case has been reported by Finestone and Wool, Medical Clinics of North America, Vol. 54, No. 2, March 1970[12] in which they reported a 59 year old man brought into hospital emergency after being found asleep in an unlocked automobile smelling highly of alcohol. He was cold and unresponsive on admission with a blood sugar determination of approximately 35 milligrams per 100 c.c.'s and he responded dramatically to 50 percent glucose intravenously. This type of hypoglycemia is unresponsive to intramuscular glucagon and is an example of alcohol blocking the release of glucose from the liver combined with a marked depletion of the glycogen storage in the liver as the result of starvation. This type of patient is

usually found to have a palpably enlarged liver with disturbed liver function tests.

Group B

The second group encountered in Category I is another group of patients who have been found to have disturbed ability in handling and storing sugar and who are under hospital care (acute alcoholism, DT's, etc.) for the first 48 to 96 hours. It would appear that approximately twenty percent of these cases who showed liver damage also turned out to have a diabetic-like curve on the six hour glucose tolerance test with some of them showing a low blood sugar below 60 milligrams percent around the fourth to fifth hour of the test. The low-fasting level is apparently due to a decreased ability of the liver to produce glucose. This combination of pseudo-diabetic and hypoglycemic state that is seen may be due to decreased hepatic capacity to store carbohydrates due to temporary dysfunction of the liver cells combined with a preliminary increased insulin resistance followed later by a rebound of decreased insulin resistance. It would appear to be wise to postpone six hour glucose tolerance tests on this type of patient in acute stage of alcoholism until an adequate nutritious diet has been maintained for a period of at least three to six weeks to obviate many false negative diabetic glucose tolerance curves due to temporary dysfunction of the liver cells. It has been the custom in our clinic to label these cases as alcohol-induced cases of temporary pseudo-diabetes which may return to normal in a three to six month period. The majority of these cases are then followed up at suitable intervals to rule out the possibility of true diabetes developing at some future date.

Category II: Fed state post-prandial hypoglycemia without disturbed liver function tests

The second category of alcoholic patients with hypoglycemia who have been of great interest to our clinicians have been the:

(a) the alcoholic group with history of previous gastrectomy,
(b) the alcoholic group in the three months to one year convalescent phase of rehabilitation.

Group A

In this particular group we have found evidence of post-prandial fed state hypoglycemia occurring without liver damage, in alcoholics who have had a previous gastrectomy. The rapid entry of food into the small intestine results in the rapid elevation of blood glucose leading to hypersecretion of insulin and hypoglycemia. In a few instances, post-prandial hypoglycemia may be an early manifestation of diabetes mellitus.

Group B

The other group in Category II that have been studied occurred in our convalescent three month to one year rehabilitation program

showing evidence of fed state post-prandial hypoglycemia without any evidence of liver damage. A study of 89 of our patients between 1969 and 1973 with blood glucose tests has demonstrated extreme sensitivity of a percentage of these patients to the blood-sugar lowering action of alcohol persisting long after adequate alimination and prolonged rehabilitation has occurred in a protected sobriety environment. This particular type of post-prandial fed state hypoglycemia occurs in the three to twelve month rehabilitation period of the recovering alcoholic. Many of these patients have been labelled **carboholics** and are noted to have a tremendous craving for coffee and sweets. They have been prone to post-prandial episodes of headache, weakness, tachycardia, hunger, excessive sweating, loss of concentration, anxiety and depression.

This type of hypoglycemia is post-prandial in timing, usually occurring two to five hours after a meal rich in carbohydrates. It would appear that this condition can possibly be an important contributing factor to the increased anxiety on the part of the patient in this phase of his treatment. It is conceivable that this factor can trigger further drinking in order to ease distressing symptoms leading to the dry-drunk syndrome, wherein the patient looks and acts emotionally drunk. Many of these patients, it would appear, have turned back to alcohol during their rehabilitation program because alcohol as a sugar and sedative drug gives them the answer for many of the symptoms that have been outlined above. This group is also very vulnerable to tranquilizer dependencies for the same reason.

Category III — Organic hypoglycemia

A third group of hypoglycemias have been reported in the literature and are worth mentioning and these are the rare organic types.

A case has been reported by Dr. M.G. Wool, Medical Clinics in North America, Vol. 54, No. 2, March, 1970[12] in which organic hypoglycemia had been mistaken for alcoholism. This particular case was due to a fasting state hypoglycemia due to a hidden tumor of the pancreas. The patient was brought to the hospital drunk and following a check for incoherent speech and mental confusional state, a diagnosis of hypoglycemia was made. He eventually died in shock and post mortem revealed a tumor of the pancreas as the cause of organic hypoglycemia (85% are usually Benign Insulinomas, Islet Cell Tumors with the remaining 15% malignant).

Category IV — Hypoglycemia induced by insulin and hypoglycemic agents

It must be remembered that acute medical and surgical stresses will increase insulin requirements. However, as these requirements subside, hypoglycemia can result from failure to decrease the insulin dosage. In this group, one may find the elderly alcoholic patient who is diabetic and who may have been taking oral hypoglycemic agents.

The major hypoglycemic drug to be considered in this category of patient is Diabinese (Chlorpropamide) due to its long half life of thirty-six hours and delayed renal excretion. Elderly alcoholic diabetic patients with impaired renal function are particularly vulnerable to this complication of therapy. Many of these cases have shown episodes of mental confusion, stiffness of an arm or leg or numbness which can confuse the issue as to whether or not it was indeed due to hypoglycemia or due to a cerebral vascular accident. It must be remembered that diabetic patients taking oral hypoglycemic agents or insulin are particularly prone to the blood sugar lowering effect of alcohol. A profound hypoglycemia induced with a combination of alcohol and insulin may prove refractory to usual therapy and may end up producing permanent mental changes.

This is an outline of the clinical picture of low blood sugar which is to be given to patients undergoing the six hour glucose tolerance test. Each patient is to note the various symptoms as to yes, no and timing at which they occur during the six hour glucose tolerance. The symptoms may be divided up into **Central Nervous System** Symptoms Group I and Group II.

GROUP I	**Yes**	**No**	**Time**
Headaches	____	____	____
Faintness	____	____	____
Restlessness	____	____	____
Aggressive Outbursts	____	____	____
Confusional State	____	____	____
Disorientation as to Time & Place	____	____	____
Memory Loss	____	____	____
GROUP II			
Double Vision	____	____	____
Slurring Speech	____	____	____
Twitching Muscles	____	____	____
Muscle Spasms	____	____	____
Temporary Paralysis of an arm or a leg	____	____	____
Seizures	____	____	____
Coma or Stupor	____	____	____

The symptoms due to stimulation of the **Sympathetic Nervous System** are as follows:

	Yes	No	Time
Excessive Sweating	_____	_____	_____
Flushing	_____	_____	_____
Nausea	_____	_____	_____
Chilliness	_____	_____	_____
Trembling	_____	_____	_____
Weakness	_____	_____	_____
A rapid pounding pulse	_____	_____	_____
Palpitations of the heart	_____	_____	_____
Numbness in the hands and feet	_____	_____	_____
Hunger	_____	_____	_____
Apprehension	_____	_____	_____

Conclusion

A review of the literature is described, outlining the different types of hypoglycemias reported by many workers in the field. Particular interest in this paper is focused on the post-prandial hypoglycemia of the fed state sober alcoholic in the first year recovery phase from alcoholism, so called carboholic. The therapy of this type of hypoglycemia would appear to be the use of a high protein diet which facilitates gluconeogenesis leading to a slower rise in blood sugar, the decreased carbohydrate intake providing a decreased stimulus for insulin secretion. In our practice, a high protein low carbohydrate diet, divided into six small meals a day, has been found useful combined with multivitamin B complex even if the exact reason is not fully understood. A review of hypoglycemic states is presented which may be helpful to physicians in clinical practice who are dealing with cases of hypoglycemia complicating alcoholism.

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The Fetal Alcohol Syndrome*

Elizabeth J. Ives, M.B., Ch.B., FRCP(C)

Professor and Clinical Geneticist,
Memorial University of Newfoundland

Maternally ingested alcohol is generally damaging to the developing fetus. Although this has now been established beyond a reasonable doubt, in the era of recognition of teratogens such as rubella and thalidomide, it is curious that the effects of such a widely used substance were overlooked for so long. In fact, there are many historical references to abnormalities in infants that were suspected of being caused by alcohol during pregnancy.

Around 1960-70, fetal alcohol effects were independently rediscovered in France and the USA. Jones and co-workers, in their now classic paper, clearly described the pattern of malformations which can be seen in the offspring of alcoholic mothers which has become known as the fetal alcohol syndrome (FAS).

Definition

Since there are no consistently occurring gross or striking malformations in FAS, the most important prerequisites leading to its recognition are awareness of its wide prevalence and a high index of suspicion. There are many features common to the dysmorphism of FAS and that produced by other teratogens and, in the absence of a specific diagnostic test, very specific criteria must be adhered to when diagnosing FAS.

FAS is defined as a specific pattern of altered growth, structure and function in which there is:

- a history of maternal alcohol ingestion or a sibling with FAS
- pre- and postnatal growth retardation
- characteristic facial features
- relative microcephaly, developmental delay or central nervous system (CNS) abnormality
- a higher incidence of many different structural malformations, although the presence of these is not essential to diagnosis.

Utilizing this definition, infants labelled as having FAS represent only the 'tip of the iceberg'. Thus, individuals with only two or three of the above features are said to have 'fetal alcohol effects' (FAE).

Incidence

The frequency of FAS is difficult to establish, as the diagnosis is often overlooked, a history of maternal alcohol intake may not be obtained, and criteria for diagnosis of cases vary. Furthermore, avail-

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able data have usually been obtained from specific population groups, and are not necessarily applicable to the population as a whole.

Studies from the USA, France and Sweden have all shown birth prevalence rates of FAS of approximately 1 in 750 births, whereas the British Columbia Health Surveillance Registry shows a lower rate of 1:2,717 births for the general population. In specific communities where alcoholism is a major problem, such as some native North American Indian groups, high prevalence rates such as 1:100 or 1:150 births have been observed.

Overall, in the USA, it is felt that FAS occurs with an incidence of approximately 1-2:1,000 births, thus approximating the frequency of Down syndrome in newborn infants. Possibly as many as twice this number have FAE.

Pathogenesis

Experimental work with animal models indicates that the agent which produces FAS is ethanol itself, rather than one of its metabolites such as acetaldehyde. It has also been shown that alcohol acts by causing premature cell death in certain critical regions such as the neural crest. At later stages in fetal development, damage also appears to be produced by abnormalities of cell movements. This is particularly well documented in the fetal brain, where characteristic abnormalities of the cellular architecture reflect disturbances in cell migration.

Fetal damage from alcohol is both time- and dose-dependent. Growth retardation can result from exposure at any stage of pregnancy, but structural anomalies are observed only with exposure during organogenesis. However, there is marked variability in outcome even for the same dosage and duration of exposure.

It is very probable that, similarly to the adult response to alcohol, there are large genetically determined individual and population differences in fetal susceptibility to alcohol. The sequence of events leading to FAS is depicted in Figure 1.

Features of fetal alcohol syndrome

Maternal alcohol intake

Initially, it was thought that FAS occurred only in the offspring of mothers with established evidence of chronic alcoholism, but it is now known that this does not have to be the case. Although FAS is more likely to occur following continuous and higher intake of alcohol during pregnancy, it has also been observed after intermittent or binge drinking and lower levels of intake.

It may be very difficult to obtain an accurate retrospective history of a mother's alcohol ingestion during pregnancy, particularly if the levels of intake are lower. In situations in which the diagnosis of FAS is suspected, maternal guilt or sometimes even continued postnatal drinking may further compound the difficulties, making it necessary

to tap other sources of information such as relatives and friends or, especially, community health personnel.

It should also be remembered that the family history and past reproductive history may be very helpful. The health and care status of previous children can be an indicator, and frequent early spontaneous abortion is a well-documented feature of above-average maternal alcohol intake.

In order to compare a patient's alcoholic intake with those of populations as documented in most studies, it is customary to record alcohol intake in terms of 'drinks' or volume of absolute alcohol ingested per day. A 'drink' is 12 oz. beer, 4 oz. wine or 1.5 oz. liquor, and is equivalent to approximately 1 oz. (30 ml.) absolute alcohol. As will be discussed later, the accuracy of predicted risk to an unborn fetus is very dependent on knowledge of the true quantity of maternal alcohol intake as well as its gestational timing.

Growth retardation

Prenatal growth deficiency is common, and FAS should always be considered in a newborn infant categorized as having intrauterine growth retardation. Both weight and head circumference tend to be more affected than length, but it is easy to overlook minor degrees of growth retardation at birth, especially if some significant malformation demands immediate attention.

Postnatal growth deficiency is invariable and becomes relatively more apparent with age. Weight continues to be more affected than height, and the poor accumulation of adipose tissue may be the reason that the infant is brought to the physician's attention. At this time, the absence of catch-up growth from small size at birth may then become apparent.

The head circumference is similarly related to slow brain growth, and deviates progressively from the normal curve to a greater degree than height does. An unusually small anterior fontanelle may also herald an early slowing of head growth.

While there are still few long-term follow-up studies of infants with FAS, available information indicates, as expected, that mature adult height is significantly reduced.

Facial features

The facial features of FAS distinguish it from numerous other conditions which involve growth retardation, developmental delay and various congenital malformations. These characteristics have been described frequently.

The eyes and mouth are the most consistently affected features. The palpebral fissures are short, usually with well-marked epicanthic folds and, commonly, an associated unilateral or bilateral ptosis. Strabismus is frequently seen in older children.

The upper lip is flat, with a poorly differentiated or absent philtrum, and is excessively long vertically from the base of the columella to

the lip. The vermilion margin is unusually thin. Subjective impressions of both the palpebral fissure and lip length should be verified by reference to tables of the normal range for these features at different ages.

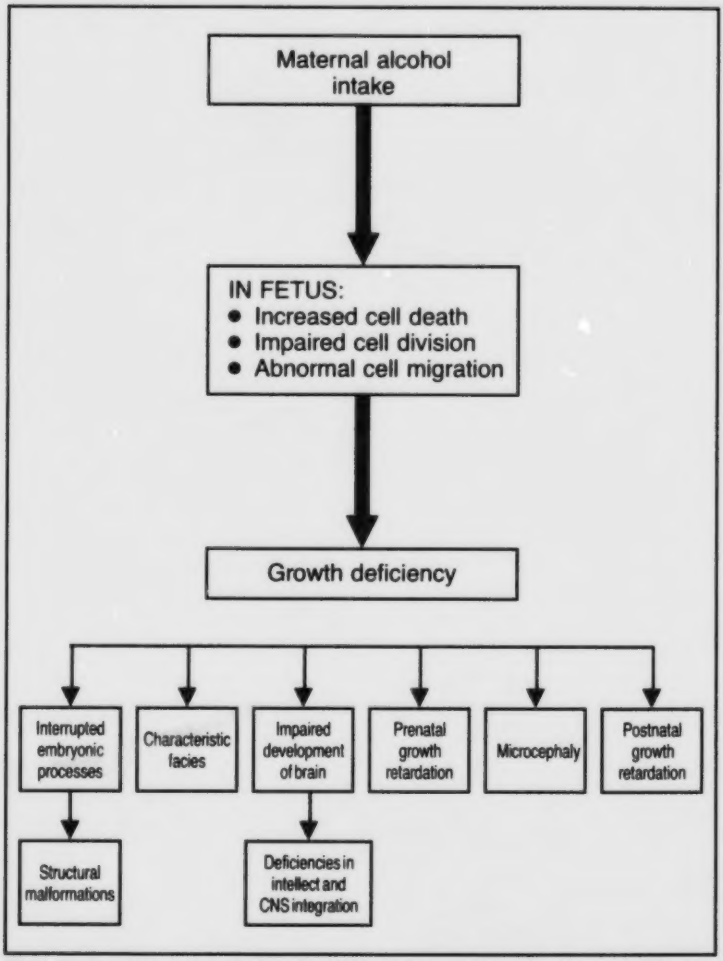

Figure 1. *Maternal alcohol ingestion causes basic abnormalities in fetal cell division, producing the various results which together constitute the fetal alcohol syndrome.*

A minor degree of micrognathia is common and the mid-face tends to be flat, but the ears are generally of normal size, configuration and position. There is often marked facial hirsutism in the newborn, most apparent on the forehead, and the hair on the relatively small head may be strikingly unruly, reflecting disordered prenatal brain growth.

Other features can also be attributed, in part, to the particular nature of the growth abnormality in FAS. For instance, abnormal growth of the embryonic medial nasal processes can result in the unusual appearance of the upper lip. Overall, there is a tendency for the facial features of FAS to become more clearly defined with increasing age and growth.

For those who find the facial features very nonspecific, it is reassuring that recent studies have demonstrated good consistency in the ability of experienced dysmorphologists to recognize the characteristic facies of FAS.

Central nervous system abnormalities

Abnormal brain growth and the resulting defects in both intelligence and other aspects of development are by far the most important components of the syndrome.

If the mother has been drinking at the time of delivery, the newborn infant may have overt evidence of alcohol withdrawal but, quite apart from this, infants with FAS tend to be jittery, hypotonic and feed poorly. Later, these children commonly display hyperactive behavior, with a short attention span. Hand-eye coordination and fine motor function are delayed, and speech delay and a variety of specific learning disabilities are also common.

In time, many of these features may improve, and an aggressive approach to appropriate stimulation and therapy is certainly justified. As with other features of FAS, there is a wide variation in the degree to which CNS abnormalities affect the adult's intellectual function, but performance is usually at or below the lower end of the normal range.

The social integration of adults with FAS and the successful development of areas of ability where function may be more normal is highly dependent on the type of care and education they receive when younger. Since many children with FAS are placed in various types of care facilities away from their own disturbed family situations, it is particularly important to try to ensure that such care is consistent and adequate.

Other malformations

In addition to the characteristic facial features already described, both major and minor structural malformations are frequent, and may well be the route by which affected individuals are first noticed. Consequently, different series which have been compiled for the study of FAS may be biased towards one of these malformation groups, depending on the frequency with which a particular malformation has been recognized.

Congenital heart defects are among the commonest malformations observed in FAS. However, the underlying condition may be obscured by an acute presentation of the cardiac problem in the newborn period. Possibly up to 50% of children with FAS have a congenital heart lesion, thus indicating the potential for prevention

among this large segment of the population of children with congenital malformations.

Abnormalities in the skeletal system are also very frequent. These can range from trivial problems such as fifth-finger clinodactyly or flexion of other fingers to the somewhat more inconvenient proximal synostosis of the radius and ulna, to other bony fusions such as that of the capitate and hamate.

Cervical vertebral fusions are also quite frequent and, when multiple levels are involved, can present a significant problem, as can the vertebral anomalies which may be seen at other levels, contributing to scoliosis and other abnormalities of the spine.

Specific, well-known malformations such as hypospadias, cleft palate, neural tube defects and abnormalities of the genitourinary system all occur more commonly than expected. Genitourinary abnormalities, with possible associated renal dysplasia, should be actively sought when the diagnosis of FAS is made, as they may be easily overlooked.

Natural history and management of FAS

The management of FAS essentially involves the management of its individual features. To date, there have been very few long-term follow-up studies of children with FAS ascertained at birth. However, it does seem clear that there is a good correlation between the severity and completeness of the early manifestations of FAS and the probability of intellectual impairment. Thus, it is important that further studies be conducted to identify the most important predictors of eventual function. Since many children with FAS become available for adoption, it is very much to their disadvantage to be prematurely labelled as mentally retarded. (The importance of a stable home environment and appropriate early stimulation was stressed earlier.)

With regard to delayed growth, as in other conditions involving short stature, adolescents with FAS find it particularly difficult to contend with this feature and its impact on their developing self-image. Attempts to increase height in individuals with FAS by hormone treatment have not yet been explored but, with the availability of synthetic growth hormone, such trials should be undertaken.

The facial features of FAS become accentuated and easier to recognize with advancing age, and other features which are recognized upon follow-up are also related to continuing growth discrepancies. In particular, it has been observed that many children with FAS have significant problems with dental abnormalities and malocclusion. Visual problems, such as myopia, and auditory difficulty from chronic otitis media are also common. Thus, children with FAS require particularly careful comprehensive and regular pediatric reviews.

Prevention of FAS

FAS with all its sequelae could be totally prevented if all women of child-bearing age avoided alcohol entirely but, unfortunately, this

condition will never be met. Avoidance of excess alcohol is always appropriate, and total avoidance when conception is being actively attempted is wise. Total avoidance should certainly be the case once a pregnancy is recognized and, fortunately, many women experience a natural aversion to alcohol during pregnancy, which makes this state of abstinence easier.

Reduction of alcohol intake at any stage in pregnancy can be advantageous to the fetus. Although early exposure influences organogenesis, critical aspects of development also take place much later, such as cell migration patterns in the brain.

Education about the effects of alcohol in pregnancy is a major responsibility for health personnel of all types, and the doctor's office is a particularly effective forum. There is an abundance of educational material available.

Advice for a pregnant woman who has already exposed her fetus to alcohol is a different matter. Although complete FAS has not been seen with a daily intake of less than 30 mL of absolute alcohol, it is unwise to assume that there is any safe limit for alcohol intake in pregnancy. A combination of prospective and retrospective studies suggest that the risk of a fetus having FAS varies from 2% when the mother consumes a daily average of 30 mL of absolute alcohol, to as high as 30-50% when the mother is a chronic alcoholic.

The timing of alcohol ingestion is also important. Intake near the time of conception is critical for the occurrence of dysmorphism, and intake at later stages has a continued effect on fetal growth.

When a pregnant patient inquires about potential risk to the fetus, each has to be evaluated individually in the light of all the available information. This should include knowledge of the individual and population effects of alcohol, as well as personal and cultural patterns of drinking. The outcome of previous pregnancies is also important as an indicator of genetic susceptibility to alcohol. All this evidence must then be carefully considered to arrive at the best possible estimate of risk to the fetus, and to assist the mother in reaching the most appropriate decision as to whether the pregnancy should be continued (if this is still an option).

Significant maternal guilt is likely to be present, and management of pregnancies which continue require a great deal of support. Major assistance can be provided in this regard by appropriate community health personnel, as well as counselling directed more specifically to the reduction of alcohol intake.

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Role of Alcohol as a Co-Carcinogen*

Saul Cohen, M.D.

Summary

If cancer occurs because of what we eat, what we drink, what we smoke, and to some extent of where we live and work, it is then a truism that over 80% of cancers in human beings are related to environmental causes and, therefore, preventable. The medical profession must meet the challenge of identifying and controlling those environmental and lifestyle factors that can lead to cancer, since the World Health Organization predicts in the year 2000, the annual death rate from cancer will have reached 8 million, from 5 million currently.

Since virtually every major chemical which one has read about in the scientific and popular press for the last 10 years, is under investigation for its carcinogenic effect, it is high time that the biological impact of alcohol received more than scant attention from the health professions as a lifestyle chemical which may be a factor in the commencement or promotion of modern man's most deadly disease.

Clinical and epidemiological studies have implicated the excessive use of alcohol with the risk of developing certain cancers, especially when combined with heavy smoking. Other factors associated with drinking and increased risk of cancer consist of geographic, racial, sex and organ specificity, variations of which must be borne in mind in any study of potential environmental hazards.

Research is presently under way to determine whether certain alcohol beverages may contain carcinogens, which may focus attention on the role of heavy drinking as one additional environmental factor in the spectrum of exogenous agents related to cancer production.

Major concerns are currently focused on the possible toxic effects of many chemicals on man, whether he takes the compound as a medicine or in his food, or whether he is exposed accidently or incidently by contamination of the environment. Among the environmental suspects are more than 170 industrial chemicals, with several hundred suspected as potential cancer causes in humans, such as arsenic, benzene, industrial, oven gases, chromium, iron-oxide, nickel, petroleum distillates and vinylchloride. Suitable attention has been placed in cancer research on the indictment of cigarettes as a major cause of lung cancer and more significantly in terms of total number of victims of heart disease. At the present time, cigarettes are now blamed for over 80% of all lung cancer deaths, plus many deaths from cancer of the mouth, pharynx, larynx, bladder and pancreas. Smokers exposed to asbestos have an eight times greater

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chance of developing lung cancer, than smokers not exposed to asbestos.

Positive identification of environmental hazards is fraught with difficulties. There is no one single cause of most cancers. Not everyone who smokes gets lung cancer and not everyone who drinks develops cancer of the tongue or pharynx. One agent might start a cancer, another may promote it. The problem in research is how to get a handle on the agent to sort it all out. Since 1910, physicians have clinically observed an association between heavy drinking and certain types of oral cancers.[1] Thereafter, however, the possible role of alcohol as a co-carcinogenic agent has received little attention until 1950. At that time, investigators were led to take a closer look at the whole spectrum of personal habits in relation to the development of cancer, following the recognition that cigarette smoking was the primary cause of lung cancer in over 80% of cases.

Alcohol and cancer of upper aerodigestive tract

In the following decade between 1950 and 1960, the World Health Organization[2] surveyed current research on alcoholism and cancer. This association reported a definite relationship between excessive drinking of alcohol beverages and an increased incidence of cancer of the mouth, larynx, esophagus, liver and lung. Animal studies, however, have so far failed to support these findings. A study by Rothman and Keller[3] indicated that men who drank more than 6 oz. of whiskey and smoked 40 or more cigarettes a day, were 15 times more susceptible to oral cancer than the general population. This report concluded that 75% of all oral cancer in men was accountable to the combination of drinking and smoking. Towards the end of the 1950's, Wynder and his colleagues,[4,5,6,7] in a series of studies, found that patients with oral and laryngeal cancers were considerably heavier drinkers than controlled patients. They concluded that heavy drinkers had roughly a ten times greater risk of developing cancer of the mouth, than minimal drinkers. When the amount of alcohol consumed increased, the relative risk of cancer of the mouth, extrinsic larynx and esophagus, was also increased much more so with whiskey than with beer and wine.

Other investigators[8,9,10] have reported an apparent association between drinking and cancer of the oral cavity and esophagus that persisted when controlled subjects were matched for tobacco use. Lung cancer was found to be associated with tobacco, but not with alcohol use, while cancer of the stomach, which has been declining in recent years, was associated with neither alcohol nor tobacco use. No association was found between cirrhosis of the liver and cancer of the mouth, pharynx, larynx, or esophagus. From these epidemiological indications,[11] Terris and Keller, inferred that alcohol may act as a carcinogen or a co-carcinogen on susceptible tissues of contact, but not indirectly through impaired liver metabolism. Research in France has provided important evidence on the relation of alcohol to cancer of several sites.[12] Schwartz and his associates investigated close to

4,000 cancer patients according to the amount they drank, and whether they showed signs of alcoholism as diagnosed by the occurrence of tremors of the extremities, spider telangiectasis and morning drinking. They also studied another group of over 1,800 patients to determine the possible interaction of alcohol and tobacco. Their results show that patients with cancer of the oral cavity and esophagus, drank considerably more than the controlled subjects, even after adjustment for tobacco use and age. This relationship was particularly striking in cancer of the esophagus. Alcoholism was also significantly more common among patients with cancers of the same sites and also those with cancer of the tongue, even after adjusting for tobacco use and age.

Three prospective studies on the drinking patterns of alcoholic persons and their risk of developing cancer have been conducted in three countries, Canada, Norway and the United States. The Canadian study by Schmidt and DeLint,[13] was the follow-up over 5,000 men and 1,000 women, treated at the Toronto Addiction Research Foundation, between 1951 and 1963. This study showed that cancer of the upper oral and digestive tract occurred 5 times more frequently among the alcoholic persons, than in the general Ontario population.

In a second study in Oslo, Norway, between 1925 and 1940, Sundby and Associates[14] showed on a follow-up to the end of 1962, that these men faced a multifold increase in the risk of death from cancer of each of the upper oral and digestive tract sites, nearly the same increased risk from cancer of the larynx and a smaller increased risk of death from lung cancer. No excess mortality from cancers of the stomach, pancreas, liver, or intestines was observed.

The third study in the United States by Pell and D'Alonzo[15] of 900 alcoholic employees of an American Corporation, with an equal number drawn from among 75,000 non-alcoholic employees of the same Company, showed that the alcoholic employees had a nearly fourfold excess of cancer deaths involving the mouth, pharynx, esophagus and lung. They pointed out that in the latter 3 studies smoking was not taken into account.

The data on lung cancer in two of them, however, suggested an important role of smoking in these samples, re-emphasizing the difficulty of evaluating any possible contributory role of drinking, when smoking and possible other relevant factors are not taken into consideration simultaneously.

The roles of smoking and drinking in cancers of the upper oral digestive tract have been difficult to separate due to the association of heavy drinking and smoking in the same individuals. Since alcohol comes in closer contact with the ingestion tract, and tobacco smoke comes in closer contact with the inhalation tract, a possible differential contributory relationship can be suggested. In addition, it would appear that patients with cancer of the ingestion tract have used more distilled spirits than those with cancer of the inhalation tract. One study showed by Kissen, *et al.*[16,17] and Associates, revealed that patients who had primary cancer of the floor of the mouth, the

hypopharynx and the esophagus had a higher drinking to smoking ratio, than patients with primary cancers of the roof of the mouth, larynx and nasopharynx, who smoked more than they drank. A study by Rothman and Keller[3] concluded that the relative risk of buccal and upper respiratory tract cancer among those who used both alcohol and tobacco, was greater than the sum of either risk alone.

Cancer of the mouth is among the most common neoplasm in parts of Asia, particularly in India,[18] where drinking by the general population is relatively minimal and alcoholism is presumed to be rare, tobacco is thought to be the most potent carcinogenic factor in these geographic areas. Prolonged exposure of oral tissue to tobacco may result in Leukoplakia lesions which have a high risk of malignant transformation and are generally considered to be pre-cancerous.[19]

Malnutrition and anemia are also associated with the increased risk of oral, hypopharangeal and esophageal cancer. This is evident in the relationship of Plummer-Vinson Syndrome[20] to nutritional deficiency especially Vitamin B complex and iron and the association of that syndrome with cancer of the mouth, pharynx and esophagus, in women in Sweden.[21] In a study of American women with oral cancer by Wynder and Associates,[22] revealed a Plummer-Vinson like Syndrome of glossitis, brittle nails, and early loss of teeth, which appeared to be related to dietary deficiencies. It is thus possible that the increased risk of oral cancer in alcoholism may be related to the nutritional defects associated with heavy alcohol intake.

In a prospective study of 3,000 alcoholic patients by Kissen, *et al.*[23] 8 cases were found to have carcinomas of the mouth, larynx, or pharynx, but none in 3,000 matched non-alcoholic control subjects. The 8 alcoholic patients that developed carcinoma had longer average smoking and drinking histories, than the non-cancerous alcoholic subjects. The duration of exposure to a carcinogenic factor in the latent period, between exposure and development of cancer, appear to be important areas for study in the understanding and prevention of these carcinomas. Despite the association of parotid gland swelling with excessive drinking, no association has been observed between parotid gland carcinoma and alcohol intake. A triad of gynecomastia, Dupuytren's contracture of the palms and parotid gland hypertrophy have been reported in cases of chronic alcoholism.[24]

Alcohol and the esophagus as a specific site of cancer

The highest incidence of cancer of the esophagus, a usually rapidly fatal disease is reported in parts of Iran, Soviet Union, Africa and the Brittany region of France. Alcohol consumption in these areas varies from almost nil in Iran to very high in Brittany.[25] Wide differences in esophageal cancer incidence between the sexes and between adjacent communities indicate that external factors may be important. In western countries where esophageal cancer occurs mostly in men,[26] excessive drinking is thought to be a major contributor to increased risk, with tobacco use playing a synergistic role. In the United States

esophageal cancer death rates are now stable among white men, but increasing among non-white men. The reasons for this striking increase among non-white men requires study and careful assessment of drinking, smoking and possibly other relevant habits. Increased heavy smoking and drinking among non-white men,[27] together with improved living standards, changes in diet and urbanization have all been suggested as factors requiring investigation.

A recent retrospective study[28] revealed that while there are only 2.7 cases of esophageal cancer per hundred thousand in the United States, 69% of the patients with cancer of this site also had a history of alcoholism. A higher frequency of alcoholism among patients with cancer of the esophagus has also been reported[29] than among those with cancer of the colon. In one study in 1962,[12] smoking was found to be less important than alcohol in esophageal cancer. In 1961,[26] another group demonstrated that smoking in the absence of heavy drinking appeared to have little or no effect on the development of esophageal cancer. A correlation study in 41 states in the U.S.A.[30] showed that alcohol consumption was related to the increased risk of esophageal cancer mortality among both white men and women. Poverty and the particular hazards of certain occupations[28] may also contribute heavily to risk. Bartenders, for example, were found to have twice the incidence of cancer of the esophagus, as the general population.[18]

Malnutrition may be an important factor contributing to risk in certain geographic areas of Asia, where the incidence of esophageal cancer is among the highest in the world, but heavy drinking is relatively rare.[31] In Africa,[32] esophageal cancer rates vary greatly, in a country where malnutrition is very widespread, suggesting that other factors must be playing an important part. In certain regions of eastern and southern Africa,[31] where the esophagus is the most common site of cancer in men, it has been suggested that some local alcohol beverages, made from maize, such as Kachasu, contain carcinogens. Other possible exogenous factors found in African beverages, have been suggested as carcinogenic and these are Nitrosamines and Zinc.[32,33,34,35] However, there are many regions in Africa with high rates of cancer of the esophagus where neither of these latter contaminants are to be found in the local beverages. In a study of esophageal cancer in Singapore (Chinese)[36] found that men with esophageal cancer drank more Samsu, a strong local liquor, than men without esophageal cancer. The custom of drinking all beverages, including coffee and tea at burning hot temperatures appeared to be a stronger risk factor for both sexes, however. In France, Tuyns[25] noted that the mortality from esophageal cancer is more highly correlated with mortality from alcoholism. Since death from alcoholism occurred among those who drank primarily distilled spirits, the higher mortality from esophageal cancer, in this group, suggested that the alcohol strength of the beverage may more importantly influence the development of esophageal cancer than the quantity consumed by the individual. However, there were 3 health regions in France which showed no increased rate of esophageal cancer despite the high rate of

alcoholism. This pattern suggested that alcohol may be a vehicle or solvent for a carcinogen present in certain spirits, for example those mainly used in Western France and not in other areas such as Savoie and Ardennes. Tuyns believes, therefore, that some ingredient in this specific beverage, with alcohol serving as the solvent for carcinogens, is more important than the quantity consumed. Brittany is a small geographical area of Western France, in which there is an extremely high incidence of esophageal cancer among men, over 50 cases per hundred thousand. This area with a very high rate of alcoholism was chosen for research[37] as an excellent place to study the effects of heavy drinking, particularly to determine why certain individuals developed cirrhosis, while others developed esophageal cancer, or psychiatric disturbances such as delirium tremens.

Alcohol and the lung

The apparent relationship between heavy drinking and cancer of the lungs and air passages may be a statistical artifact. Heavy drinkers[7] are frequently heavy smokers, but not all smokers drink heavily. Since heavy smoking is closely related with cancer of the lungs and bronchitis, heavy smokers might be expected to drink more than controlled subjects. It has been suggested that a higher concentration in the alveoli and the bronchial system might potentiate the carcinogenic effect of tobacco, but data to support this postulate are not available.

Alcohol and the pancreas

In the last decade,[38] cancer of the pancreas has become the third leading cause of cancer death among men, 34 to 54 years of age in the United States. Some investigators believe that pancreatitis often associated with alcoholism,[17,39] may be the mechanism that closely links alcoholism with cancer of the pancreas. A prospective study[40] of Japanese men has given preliminary indications that heavy drinking is related to increased mortality from pancreatic cancer and researchers conducting a prospective study[41] in Norway are finding a similar trend.

Alcohol and cancer of the large bowel

Several investigators have postulated a relationship between cancer of the large bowel and heavy beer drinking, but the results of various studies have not consistently supported this hypothesis.[42,43]

Alcohol and cancer of the liver

In Europe and North America,[18] the kind of individual in whom hepatoma, primary cancer of the liver, is most likely to develop, is an alcoholic person with cirrhosis. Although cancer of the liver is not common in Western countries, a relationship clearly exists between liver cell cancer and alcoholic cirrhosis. On a worldwide basis, 60 to 90% of all liver cell cancers arise in cirrhotic organs. One etiologically

important factor reported in the literature in the areas where hepatoma is most common, is viral hepatitis resulting in cirrhosis, leading to subsequent neoplastic changes.[44,45]

In the United States, Lee[46] reported a 30% incidence of hepatoma in alcoholic cirrhosis, but only 11% in non-alcoholic cirrhosis. It thus would appear that current evidence indicates that in the United States, alcoholic rather than post-hepatitis cirrhosis is the more important factor in liver cell cancer, while in other parts of the world, this does not appear to be true. In Japan,[47] the association of hepatoma with post-hepatitis cirrhosis was far greater than with alcoholic cirrhosis. In Southeast Asia, cholangio carcinoma is associated with liver disease, secondary to parasite infestation.[48]

It must be noted that several investigators[17] have found that cancer develops characteristically in livers showing a stage of cellular regeneration in the healing process of cirrhosis. Cancer would seem to occur in livers with marked regenerative activity regardless of the cause. This agrees with the observation of Lowenfels,[49] that patients with well established cirrhosis, who stopped drinking, may still develop tumors.

Hepatoma is frequent in Southwest Africa and Southeast Asia,[50] where cirrhosis is uncommon, but hepatoma is rare in areas where the incidence of cirrhosis is higher, such as Chile, France, Mexico and the United States. This suggests that some carcinogenic agent, not related to cirrhosis is involved in the hepatomas of Asia and Africa. The most probable carcinogenic agent[51] is Aflatoxin, a toxin from the fungus aspergillus flavus, which is often found as a contaminant of peanut meal. In Japan, many food stuffs, as well as sake are treated with this fungus to improve flavour. The association between the ingestion of sake made from rice, with cirrhosis of the liver and hepatoma has led Sakurai[47] to speculate that other fungi may be operative in causing liver cancer.

An excellent book has recently been published by Bolt and Remmer,[52] on primary liver tumors. Indictments of key carcinogens are contained in a section on liver tumors, elicited by specific factors covering studies on vinyl chloride, sex hormones, anabolic steroids, synthetic androgens, long-term anti-convulsant therapy and radiation-induced liver cell carcinomas.

Alcohol and other sites

Some investigators have found an association between alcoholism and prostatic cancer,[14,15] but others have not. Prospective epidemiological studies, which include alcohol among the significant variables are needed.

Since alcohol reaches the stomach in relatively strong solutions, the possibility of a link between drinking and gastric cancer has been explored. A study by McDonald[53] revealed an excessive incidence of alcoholism in patients with cancer of the cardiac portion of the stomach. The greater ratio of men to women affected would also

favour this possibility. However, even though there has been an apparent increase in the consumption of alcohol and a co-existent increase in the prevalence of alcoholism, stomach cancer has been on the decline in recent years in the United States. Thus it would appear that other active factors may be responsible for the increased occurrence of cancer of the stomach in association with alcoholism.

Dr. Roger R. Williams[55] has recently reported a relationship between alcohol ingestion and a higher incidence of cancers of the breasts, thyroid and malignant melanoma.

Mechanisms of pathogenesis

Some of the possible mechanisms by which drinking might increase the risk of cancer in specific body sites are as follows:

1) Alcohol may act by augmenting the cancer inducing effect of other agents, such as smoking. The combined effect of alcohol and tobacco may be more than the sum of the two, it may be synergistic. Thus, either heavy smoking or heavy drinking increases a person's risk of developing oral cancer but the risk resulting from both together is greater than the sum of the risk of either one alone.[3]

2) Alcohol, especially in strong solutions, may act as a direct irritant to mucosal cells, making them more vulnerable to other carcinogens, or it may serve as a solvent or vehicle for carrying carcinogenic trace substances. Some of the possible carcinogens implicated in alcohol beverages used in various parts of the world are Nitrosamines, Aflatoxin, Polycyclic-hydrocarbons, fusel oils, aromatics and alkaloids.

3) In cancer of the upper oral digestive tract a mechanism hypothesized by Kissen and Kaley,[17] is the increased local exposure of tissues through a decrease in saliva volume with local pooling of carcinogens during intoxication such as tobacco tars, which would prolong exposure to a concentrated carcinogen.

4) Malnutrition associated with alcoholism especially as it affects the integrity of the mucosa, can be a possible carcinogenic mechanism. Specific protein, iron and vitamin deficiencies have also been suggested as perhaps important carcinogenic factors in the malnutrition of alcoholism. The paper of Dr. Roger Williams,[55] suggests the hypothesis of the development of cancer of the breast, skin and thyroid with alcohol use. Specifically he proposed that alcohol stimulates anterior pituitary secretion of prolactin, thyroid stimulating hormone and melanocyte stimulating hormone. This hypothesis suggests that alcohol acts much like reserpine in stimulating pituitary secretion, a concept which has received considerable publicity since studies suggested an association between reserpine and breast cancer. Dr. Williams' hypothesis specifically is based on the fact that under the stimulation of these hormones, the 3 target tissues exhibit increased mitotic activity and hence an increased susceptibility to the development of malig-

nancy. Other studies under way[56] are attempting to prove in animal studies, that alcohol as a co-carcinogen might affect the development of cancer by increasing the incidence or growth rate of tumors, or by reducing the latency period of tumor development.

5) Alcohol liver injury[57] may affect important functions of chemical detoxification and biotransformation by the endoplasmic reticulum, thereby, enhancing multiple processes of carcinogenesis. Excessive alcohol consumption associated with liver disease has been shown to be immunosuppressive. The malnutrition accompanying liver disease may also cause profound depression of cell-mediated immunity. By producing cirrhosis, alcohol may lead to an altered metabolism of carcinogens in the liver so as to enhance their carcinogenic effect. Some factor related to regeneration of liver cells during the healing process of cirrhosis, has been suggested as a possible pathogenic mechanism by which hepatoma may develop in alcoholic patients with cirrhosis.

Conclusion

The excessive use of alcohol, especially when combined with heavy smoking, has been shown to increase the risk of developing certain cancers following extensive clinical and epidemiological studies. The combination of heavy smoking and heavy drinking seems to exert, not just an additive but apparently a potentiating effect in increasing risk. Cancer of the esophagus is associated especially with heavy consumption of distilled spirits. Primary liver cell cancer, while not common in the United States, is more often seen in persons with alcoholic cirrhosis. Cancer of the pancreas may also be associated with alcoholism. There has been a rising incidence of cancer of the mouth, pharynx, larynx, esophagus and pancreas. The cancer sites for which tobacco and alcohol are major determinants occur with greater frequency in men, blacks, lower socio-economic groups, and within increasing urbanization and increasing age between 35 and 70. There are wide geographic and sex variations in the incidence of cancer thought to be linked to alcohol, particularly cancer of the esophagus. Research is needed to determine whether certain alcohol beverages may contain carcinogens. Further studies of the association of alcohol consumption to cancer of certain sites are of vital importance in assessing the role of heavy drinking as one additional environmental factor in the spectrum of exogenous agents related to cancer.

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Alcoholism and Major Affective Disorder

M. Harinath, M.B., B.S., F.R.C.P.(C)

Clinical Associate Professor of Psychiatry,
University of Sask., Head, Dept. of Psychiatry,
Regina General Hospital

Most alcoholics presenting for treatment complain of nervousness, depression, feelings of hopelessness and disturbed sleep. Some of these symptoms overlap those of major affective disorder. As a result, it is important to separate primary affective disorder from alcohol related dysphoric states.

Approximately 40% of patients treated for alcohol abuse and addiction have been found to be suffering from concurrent affective disorder. Thirty to 40% of patients suffering from manic depressive psychosis have been found to be abusing alcohol.[3] Steven M. Mirin[2] found that more than half the patients treated for alcohol addiction also suffered from a non-alcohol related psychiatric disturbance. Eighteen percent of the patients in his series were suffering from major depression, 6% had a diagnosis of bipolar or cyclothymic disorder and 27.2% suffered from a generalized anxiety or panic disorder.

The above author found in his study that alcohol abusers who had no concurrent psychiatric disorder drank for the euphoriant effect of alcohol, whereas patients with agitated depression, generalized anxiety or panic disorder seemed to like the anxiolytic and sedative effect of alcohol. George Winokur,[3] in his studies, observed an increased incidence of alcohol addiction in the first degree relatives of those with manic depressive illness compared to a controlled group.

Patients with the diagnosis of alcohol addiction and suspected affective disorder need to be observed over a period of one to two weeks before making a definite diagnosis. Even though a number of alcoholics show a definite improvement by virtue of detoxification and being in a supportive environment, a number of patients continue to manifest symptoms of anxiety and depression or hypomania. These patients require further investigations and treatment involving further clinical interviews with the patient, his or her family and friends. Psychological and psychometric testing should be used to further evaluate their personality and cognitive functioning, as well as completing psychiatric and neurological assessment.

In the psychiatric assessment, it is important to observe any symptoms of diencephalic dysfunction by way of psychomotor retardation, diurnial variation of mood changes, early morning wakening, decreased appetite and sex drive. Persistence of the above symptoms in the absence of an identifiable physical pathology should alert one towards the presence of a major affective disorder.

In the management of patients suffering from major affective disorder with secondary dependency problems, it is important that the

major affective disorder be treated first with appropriate chemotherapeutic measures.

Once the psychiatric illness is in remission, every attempt should be made to have the patient take the necessary steps concerning the rehabilitation of his or her alcohol abuse or dependency problems as well as associated family and interpersonal difficulties by participating in alcohol counselling programs, attending A.A. meetings and other family and individual support programs.

The subgroup of patients who suffer from major affective disorder as well as primary alcohol addiction require attention to both these conditions concurrently. It is preferable for this subgroup to be treated in a dual diagnosis treatment centre that is equipped to deal with the above problems simultaneously.

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Methanol Toxicity

Cameron B. Wilson, M.D., F.R.C.P.(C)
Nephrology & Internal Medicine, Regina

Methanol (methyl alcohol, wood alcohol) acute poisoning

Methanol is usually taken orally, perhaps by partially intoxicated individuals thinking they are drinking ethanol or by individuals attempting suicide. On occasion, methanol has been served by accident at legitimate bars.

The sources for methanol include liquid fuel for fondue burners, solvents, paint remover, varnishes and shellacs. Antifreeze fluid used in windshield washing fluid is also a source for methanol.

Methanol is rapidly absorbed by the GI tract through the skin and respiratory tract. After oral ingestion, plasma levels peak within 30 to 60 minutes; however, symptoms may not appear for 18 to 24 hours. Methanol is slowly converted in the liver to formaldehyde and, subsequently, to formic acid, forming metabolites that are highly toxic. Volumes between 60 and 240 ml have been reported as fatal, and plasma methanol concentrations of 40 mg/100 ml of blood have been fatal in humans. Blindness has occurred after ingestion of only 10 ml of methanol. I think it is clear from this that one cannot standardize the effect of methanol on individuals, as this is highly variable. Small ingestions of methanol must be dealt with rapidly and with an equal degree of seriousness.

Clinical effects

Breathlessness is an early sign of unmetabolized methanol and tachypnea is related to the metabolic acidosis. Respiratory failure can occur suddenly and death result. Symptoms of severe metabolic acidosis may not appear for some 18 to 48 hours after ingestion.

Blurred or double vision with diminishing visual fields or spots before the eyes may be one of the early complaints. On examination, visual fields may remain unchanged initially, but ultimately, with severe intoxication, the patient may become permanently blind. Features that may be noted on funduscopic examination include a generalized "whiteness" to the retinae. There may also be peripapillary edema, a hyperemic optic disc or retinal edema. Optic atrophy will be a late finding.

Neurological features may begin to appear, such as convulsions, coma or infarcts of the basal ganglia.

Complaints of severe abdominal pain with accompanying nausea, vomiting and anorexia may occur.

Blood pressure usually remains normal unless the patient has reached a terminal stage. Be aware that methanol intoxication may be masked in a patient traumatized by another cause.

Laboratory assessment

This should include routine information including CBC, SMA-20, serum amylase, arterial blood gases, specifically blood alcohol levels including methanol, ethanol and ethylene glycol. In the case of suspected multiple ingestion, a drug screen should be requested.

A blood methanol level greater than 50 mg/dl (15 millimoles/litre) is considered severe intoxication.

Treatment

Prevent absorption

As noted above, absorption is rapid, and one should try to eliminate the agent from the stomach by initiating emesis early. Do not initiate emesis by giving Ipecac if the patient is obtunded or is progressing towards being obtunded. The risk of aspiration is much greater in this situation. Emesis is best initiated within 30 minutes of ingestion.

The dose of Ipecac syrup administered to a patient weighing between 40 and 45 kilograms is 30 ml. Fluid should be encouraged after the administration of the Ipecac.

After steps are taken in the obtunded patient or potentially obtunded patient to protect the airway, gastric lavage should take place as early as possible.

If seizures should occur, diazepam is the drug of choice to control them. The adult dose of diazepam is between 5 and 10 mg, repeating this every 10 to 15 minutes to a maximal dose of 30 mg. One must be prepared to assist with the patient's breathing if the patient becomes too sedated to maintain normal respirations.

If seizures are recurrent, phenytoin is the agent of choice. This should be given in an undiluted state very slowly, or dilute 50 mg/ml of solution in 50 to 100 ml of 0.9% saline. The rate of administration should not exceed 0.5 mg/kilogram/minute or 15 mg/minute. The adult dose of phenytoin is from 15 to 18 mg/kilogram as a loading dose. It is recommended that 150 to 250 mg be given initially, followed by 100 to 150 mg every 30 minutes as needed with a maximum daily dose of 1.5 grams.

In the patients with disulfiram ingestion, ethanol therapy should be initiated when they have signs or symptoms of severe methanol poisoning. One must be anticipating the "Antabuse reaction" (flushing, sweating, severe hypotension and cardiac arrhythmias). Hypotension is treated with fluids and pressor agents.

Ethanol therapy is of primary importance. The preparation most commonly used is a 10% ethanol solution given intravenously. Five percent ethanol solution can be used but larger volumes are required.

The ethanol loading dose, intravenously, is 7.6 to 10 ml/kilogram of 10% ethanol in a 5% dextrose in water solution over 30 minutes. This is necessary to achieve a blood ethanol concentration of 100 to 130 mg/decilitre (21.7 to 28.2 millimoles/litre). Begin the maintenance infusion of ethanol concurrent with the loading dose to maintain the blood ethanol levels at 100 mg/decilitre. The amount of ethanol needed in the average drinker is 1.39 ml/kilogram/hour intravenously. In the chronic alcoholic drinker, administer 1.95 ml/kilogram/hour, and in the non-drinker, administer 0.83 ml/kilogram/hour intravenously. This is if one is using a 10% ethanol solution. Blood gases should be obtained to monitor the degree of acidosis and determine the appropriate amount of sodium bicarbonate that is required. Also, during therapy, determine appropriate progress.

Hemodialysis should be instituted if the peak blood methanol concentration is greater than 50 mg/decilitre (15 millimoles/litre). Severe acidosis, regardless of the blood ethanol level, fluid and electrolytes disturbance despite conventional therapy, renal failure and visual symptoms are indications for dialysis. Blood methanol levels can increase after termination of hemodialysis by moving out of tissues to the plasma compartment. It is, therefore, advisable to continue the ethanol administration until methanol levels are below 30 mg/dl. Continued methanol and ethanol monitoring after dialysis is required to be sure there is no rebound effect.

If hemodialysis is not available to the rural physician, the ethanol infusion should continue for at least two to three days.

In the rural setting, where there may be a significant time delay in receiving laboratory data and there is uncertainty, as there often is, in knowing what has been ingested, the initial measures noted above should be taken and the patient transferred to a centre where information can be obtained rapidly.

In summary, measures to prevent absorption should be taken, the airway should be protected and an ethanol drip started. Complications that may occur, such as seizuring, should be treated as outlined above. The patient should then be transferred to a centre where hemodialysis is readily available. Hemodialysis may not be necessary, but the referring rural physician cannot always make that prediction. Rapid therapy is essential for a successful outcome.

For further information, call RGH Poison Control, (306) 359-4545.

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3 Special Populations

Issues Relevant to Aftercare Programs for Women*

Brenda L. Underhill, M.S., C.A.C.

Executive Director, Alcoholism Center for Women, Los Angeles, CA

Women's unique needs in recovery and the need for all-women programs remain controversial topics in the field of alcoholism. The generic approach of "an alcoholic is an alcoholic is an alcoholic" is far from being discarded. One of the reasons for the continuing controversy is the gap between research and experience. Although difficulties in obtaining a proportionate amount of funds for research on women's needs result in a lack of research-based knowledge, women-only programs have provided a wealth of clinical experience about the needs of women in recovery.

This article will provide an overview of the programmatic implications of women's recovery needs beyond initial sobriety and initial treatment. The discussion will draw upon both some empirical data on women with alcohol problems and the collective experience and knowledge developed from the Alcoholism Center for Women in Los Angeles and from other women's programs previously funded by the National Institute on Alcohol Abuse and Alcoholism (Volpe 1982/1983).

Because women's lives differ significantly from those of men in our culture, both early recovery and aftercare programs for women need to base the design and the delivery of their services on the realities of women's lives and the problems specific to women with alcohol problems.

The greater social stigma attached to women with alcohol problems as compared with male alcoholics has been well documented in the literature (Beckman 1975; Blume 1978; Marden and Kolodner 1980; Sandmaier 1978). As Sandmaier (1980, p. 9) points out: "She is likely to internalize her culture's harsh judgment of her and learn to view herself with hopelessness and hatred." Alcoholic women also have lower self-esteem than male alcoholics (Beckman 1978). Staff need to be educated about such social forces that affect women's lives.

This problem of lower self-esteem is not limited to early sobriety; it is a continuing issue for women in recovery. On a programmatic level, this means that services from outreach to aftercare must be oriented toward increasing self-esteem and self-acceptance as a woman. Attack therapy and highly confrontive counseling techniques are counterproductive to this goal. Stere (1985) offers some specifics in terms of self-esteem training exercises on both individual and group levels that service providers may find useful.

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It is important for both recovering women and staff to understand the concept of learned helplessness (Abramson *et al.* 1978; Walker 1979). When an organism is repeatedly exposed to stressful conditions and no behavior on the organism's part can reduce or control the stress, learned helplessness can result. This concept has obvious application to all women in relation to gender discrimination. Providing women with information on learned helplessness is a way to reduce the internalized self-hatred that results from such pressures as gender-based, socialized dependency patterns; physical abuse; and the emotional pain of growing up in an alcoholic family.

Healthy self-esteem also involves being able to assert one's needs and to deal effectively with anger. To that end, offering assertion training and anger groups is productive in facilitating long-term recovery. For most women, whether they are alcoholic or not, this is new behavior. Women, by and large, are socialized to be other-directed, while men are not. Miller (1976) puts the problem this way:

Women constantly confront themselves with questions about giving. Am I giving enough? Can I give enough? Why don't I give enough? They frequently have deep fears about what this must mean about them . . . By contrast, the question of whether he is a giver or giving enough does not enter into a man's self-image (p. 46)

Similarly, anger groups can assist women in overcoming societal conditioning that discourages women from directly expressing anger as a feeling. As Kaplan and colleagues (1983, p. 31) state, "The expression of anger can come to be equated with precipitating loss, not just of another person, but more importantly of one's self-esteem—one's capacity to maintain relational ties." Thus, recovering women may previously have been unable to express anger at all or could express anger feelings only in an aggressive way. Anger groups offer women a chance to learn with other women how to express legitimate anger as well as how to stay sober. In designing these groups, providers need to be aware of possible cultural and ethnic differences in styles of communicating anger (Kochman 1981).

Other issues important to the continuing recovery process for women are incest, battering, child sexual abuse, and sexual assault. Accurate data on the prevalence of these problems in alcoholic women are still incomplete; however, available statistics suggest that the percentage of women in treatment who report previous abuse range from 40 to 74 percent (Covington 1982; USDHHS 1983). Covington (1982) has observed:

So as we look at these preliminary statistics on the sexual function and abuse experiences of alcoholic women, we see that we can no longer ignore these issues in treatment. For the majority of these women, this has been part of their life experience and it is part of the shame and guilt and degradation that contributes, along with the stigma of alcoholism, to their lower self-esteem. (p. 6)

Early recovery must focus on staying sober one day at a time. During this period, a woman has not developed the coping mechanisms necessary to deal with the overwhelming pain and fear

that accompany sexual abuse. But the message that the abuse did not happen or that it was not important should never be overtly or covertly conveyed to the survivor.

As recovery progresses, it is important that women have access to services that can assist them to deal directly with the sexual abuse. The optimal timeframe for this process has not been determined through research. The experience of most women's programs suggests that these issues should not be discussed for a minimum of 6 months to a year after attaining sobriety and, even then, only within certain guidelines, such as active participation in a 12-step recovery program. Evans and Schaefer (1980) make a critical point: Without attention—at some point—to sexual abuse, relapse often occurs.

The critical importance of all-women groups becomes most obvious when addressing sexual abuse issues, but the need for special recovery groups for women extends beyond these issues. Aries (1979) reports some important research that supports the clinical experience of women's programs. Results of her study showed that (1) sex role interaction patterns replicated themselves in mixed groups—i.e. women had minimal contact with other women and allowed men to dominate the groups; (2) women in all-women groups shared a great deal with each other; (3) in mixed groups, men had a more personal orientation than in all-male groups, where men were more concerned with the expression of competition and status. As Deborah Smith Parker (personal communication, 1983), executive director of the California Women's Commission on Alcoholism, aptly summarizes the situation, "In mixed groups, men talk about their problems. The women support the men. The men get better. The women don't."

Although an all-women's approach is important in all phases of women's recovery, it may be fundamental to healing problems related to sexual abuse. Because men are the perpetrators of the vast majority of sexual abuse acts, the overwhelming majority of victims of abuse are women. To mix men and women in any alcoholism recovery group could be perceived by group members as mixing perpetrators and victims. Common sense indicates that this approach simply will not work.

Additional aftercare needs of women include stress-reduction techniques, vocational and career services, legal counseling, instruction in parenting skills, education and information on premenstrual syndrome, child care services, and access to health care services. Because less social support is available to women as compared with men in recovery (Beckman and Amaro 1984), long-term aftercare and emphasis on the development of a sober support network are also crucial factors that providers must consider in program planning for women.

In designing services for women in any phase of recovery, it also is important that providers account for individual differences among women. Women are not a homogeneous group. Although the heterogeneity of women has been seriously neglected by resear-

chers, experience has shown that differences based on race, ethnicity, class, and sexual orientation are important factors to consider in program design.

In summary, the issues that women bring to early sobriety and treatment—low self-esteem, extreme stigmatization, high probability of sexual abuse, lack of social support, and the need for support services such as child care—are the same issues women bring to the aftercare phase of recovery. Addressing these issues in a positive, women-oriented environment that promotes empowerment is essential if the recovering woman is to develop a positive self-image.

Investment in research studies that make use of the accumulated experience of women's recovery programs is needed to integrate our existing knowledge and to identify the most effective services for recovering women. The tasks—and challenges— are to identify, acknowledge, and understand the interplay of the addiction (disease) process, including relapse, and the realities of women's lives. This information must then be applied in the development of treatment philosophy, policy, and programming for women's services.

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Miller, J.B. *Toward a New Psychology of Women.* Boston: Beacon Press, 1976.

Sandmaier, M. *Alcohol Programs for Women: Issues, Strategies and Resources.* Rockville, MD: National Clearinghouse for Alcohol Information, 1978.

Sandmaier, M. *The Invisible Alcoholics.* New York: McGraw-Hill, 1980.

Stere, L.K. Feminist assertiveness training: Self-esteem groups as skill training for women. In: Rosewater, L.B., and Walker, L.E.A., eds. *Handbook of Feminist Therapy: Women's Issues in Psychotherapy.* New York: Springer Publishing, 1985.

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Volpe, J. How women recover: Experience and research observations. *Alcohol Health and Research World* 7(2):28-39, 1982/83.

Walker, L.E. *The Battered Woman.* New York: Harper & Row, 1979.

List of Women's Resources in Saskatchewan

Following is an abbreviated list of Saskatchewan groups and organizations which provide information and practical aid and support to women in a variety of areas. Included are women's centres, shelters for battered women, and sexual abuse groups.

A.B.U.S.E.
Box 742
Spiritwood S0S 2M0

Aboriginal Women's Council of Saskatchewan
62 - 17th St. W.
Prince Albert S6V 3X3
tel. 763-6005

Battlefords Interval House
11315 Clark Drive
North Battleford S9A 3P5
tel. 445-2742

Battleford's Area Sexual Assault Centre
Box 1044
North Battleford S9A 3K2
tel. 445-0055

Contemporary Women's Program
2240 Albert St.
Regina S4P 3V7
tel. 757-9096

Elizabeth Fry Society
307 - 135 21st St. E.
Saskatoon S7K 0B4
tel. 934-4606

Estevan Committee Against Family Violence
918 - 1st St.
Estevan S4A 0G6
tel. 634-9979

Isobel Johnson Shelter
1940 McIntyre St.
Regina S4P 2R3
tel. 525-2141

La Ronge Women's Shelter
Box 888
La Ronge S0J 1L0
tel. 425-3900

Lestock Women's Centre Inc.
Box 151
Lestock S0A 2G0
tel. 274-2221

Lloydminster Sexual Assault & Information Centre
Box 2033
Lloydminster S9V 1R2
tel. 875-4609

Lloydminster Interval Home
Box 1523
Lloydminster S9V 1K5
tel. (403) 875-0966

Moose Jaw Transition House
Box 1866
Moose Jaw S6H 7N6
tel. 693-6511

North East Crisis Intervention Centre
100 Bemister Ave. E.
Melfort S0E 1A0
tel. 752-9455
(24 hour crisis line)
or 752-9464 (business phone)

Pesim Weskayikan Interval House
615 - 6th St. E.
Prince Albert S6V 0N7
tel. 922-2100

Regina Native Women's Community Centre
1040 - 8th Ave.
Regina S4R 1C9
tel. 565-3940

Regina Transition Women's Society
1700 College Ave.
Regina S4P 1B9
tel. 569-2292

Regina Women's Community Centre and Sexual Assault Line
219 - 1808 Smith St.
Regina S4P 2N4
tel. 522-2777

Saskatchewan Battered Women's Advocacy Network
2149 Albert St.
Regina S4P 2V1
tel. 1-800-667-9876
(province-wide)
or 352-9121 (Regina)

Saskatoon Interval House
712 Victoria Ave.
Saskatoon S7N 0Z2
tel. 244-0185

Saskatoon Sexual Assault Centre
302 - 115 - 2nd Ave. N.
Saskatoon S7K 2B1
tel. 244-2224

Saskatoon Women's Services Coalition
307 - 135 - 21st St. E.
Saskatoon S7K 0B4
tel. 934-4606

Sexual Assault Services of Saskatchewan
302 - 115 - 2nd Ave. N.
Saskatoon S7K 2B1
tel. 244-2224

Shaunavon Family Abuse Centre
Box 783
Shaunavon S0N 2M0
tel. 297-2270, 297-2122, 297-3033

SIGN (Family Violence Counsellor)
29 Livingstone St.
Yorkton S3N 0R2
tel. 783-9409

South West Crisis Services Inc.
499 - 4th St. N.E.
Swift Current S9H 2K1
tel. 1-800-552-7437

West Central Crisis Centre
113 - 2nd Ave. E., 2nd Floor
Box 2235
Kindersley S0L 1S0
tel. 463-4357 (call collect)

Weyburn Committee Against Family Violence
425 - 5th Ave. N.E.
Weyburn S4H 0Z7

Women in Need/Shelwin House
Box 1828
Yorkton S3N 3R2
tel. 783-7233

Women's Centre
Room 115,
Memorial Union Bldg., U of S
Saskatoon S7N 0W0
tel. 966-6980

Women's Centre
University of Regina
Regina S4S 0A2
tel. 584-1255

YWCA
1940 McIntyre St.
Regina S4P 2R3
tel. 525-2141

YWCA
510 - 25th St. E.
Saskatoon S7K 4A7
tel. 244-0944

Women's Issues: Selected Readings

Incest/sexual abuse

Gil, E. *Outgrowing the Pain.* San Francisco: Launch Press, 1984.

Halliday, L. *The Silent Scream: Sexual Abuse of Children.* Toronto: University of Toronto Guidance Centre, 1986.

Martens, T. *The Spirit Weeps: Characteristics and Dynamics of Incest and Child Sexual Abuse.* (With a Native Perspective by B. Daily and M. Hodgson.) Edmonton, Alberta: Nechi Institute, 1988.

Rush, F. *The Best Kept Secret: Sexual Abuse of Children.* New York: McGraw-Hill Book Co., 1980.

Sanford, L.T. *The Silent Children.* New York: McGraw-Hill Book Co., 1980.

Sexual Assault

Brownmiller, S. *Against Our Will.* New York: Bantam Books, Inc., 1976.

Finkelhor, D., Yllo, K. *License to Rape: Sexual Abuse of Wives.* New York: Holt, Henry & Co., 1985.

Lewis, D., Clarke, L. *Rape: The Price of Coercive Sexuality.* Toronto: The Women's Press, 1977.

Battering

NiCarthy, G. *Getting Free: A Handbook for Women in Abusive Relationships.* Seattle, WA: Seal Press-Feminist, 1986.

Walker, L. *The Battered Woman.* New York: Harper & Row Publishers, Inc., 1977.

Alcoholism in the Elderly*

Saul Cohen, M.D.

SUMMARY. This article concentrates on the identification, confrontation, and treatment of the elderly with late-onset alcohol-abuse problems. The author reviews signs and symptoms that are common both to the aging process and to late-onset problem drinking. He also provides a list of laboratory "markers" that may be helpful for the diagnosis and follow-up of this not infrequent problem.

Until the late 1960s, alcoholism was not considered a problem of the elderly. It was presumed that as alcoholics aged, they would either die prematurely from the consequences of their drinking problem or somehow burn out and stop drinking. The general view was that very few elderly people pursue an alcoholic pattern of drinking. No one seems to have suggested that a person might gradually develop a drinking problem with advancing age.

By the mid-1970s, however, increasing concern was being expressed, both on the North American continent and in Europe, that alcoholism could indeed become a problem for the elderly, and that traditional methods of treating alcoholism were often neither effective nor appropriate for persons in this age group.

Dimensions of the problem

It is very difficult to establish the incidence of alcoholism and problem drinking among the elderly. There is an obvious lack of data throughout the various Canadian provinces reviewed. The difficulty of obtaining good data on this topic is the result of several factors:

- There is no standard, widely accepted definition of 'alcoholism' as applicable to the elderly.
- Attempts to discover such data as might be available are met with denial and/or countered by cover-up.
- Patients show increasing resistance to programs, and administrators fail to build programs to meet the needs of patients.
- Such evidence as is available is anecdotal rather than factual.

Defining the terms

In any attempt to establish widely acceptable definitions, the first problem is to determine the stage at which a group can be termed 'elderly'; the second problem is to define the terms 'alcoholism' and 'problem drinking'.

In the most widely known studies, it is the age of the researcher that usually establishes the definition of the term 'elderly'. A researcher who is 30, for instance, generally considers anyone over 50 to be elderly. When he or she reaches the age of 40, anyone over

* Reprinted with permission from *Canadian Family Physician*, March, 1988, *34*, pp. 723-731.

55 seems elderly. By the time the researcher is 60, the elderly are those over 65. For the purpose of this paper, the over-65 age group is classified as 'the elderly'.

The second problem is the definition of the term 'alcoholism'. In most earlier studies, the definition of alcoholism has been based on the quantities of alcohol consumed. The definitions assigned on this basis certainly would not cover many elderly persons who drink relatively little but nonetheless have major lifestyle problems directly related to their use of alcohol. Thus for research purposes it would probably be more useful to establish a definition based on the presence of physical, economic, legal, and psychosocial problems directly associated with the use and abuse of alcohol.

I would suggest, therefore, that an alcoholic be defined as a person who, as a result of the abuse of alcohol, has experienced serious, recurring, personal, social, and health problems, and who, because of these problems, would benefit from treatment. The definition of 'alcoholism' must stress not how much a person drinks but what unpredictable uncontrollable thing happens to him when he drinks. There is no clear line of demarcation between hazardous drinking and alcoholism because there is a very wide range of personal styles of alcohol consumption, and the degrees between different levels of consumption are often imperceptible.

Identifying the target population

The second difficulty associated with studies of problem drinking stems from the denial and "cover-up" that accord with the hidden nature of problem drinking among the elderly. Family members of the problem drinker almost always deny the problem or try to hide it from the rest of the world. Many of the elderly themselves resort to denial to a much greater degree than do their younger counterparts.

Because of the hidden nature of the problem, the proportion of male to female problem drinkers over the age of 60 is still very difficult to determine. It would appear that there is a higher percentage of male problem drinkers in this age group than of corresponding females, in a ratio of about 4:1. The low number of elderly females diagnosed as problem drinkers is a result of the social disadvantage that attaches to the elderly female alcoholic, who must contend with a triple stigma: being elderly, being female, and being alcoholic. This combination of circumstances leads to more determined denial and cover-up both on the part of the female patient and on the part of her immediate family.

Establishing a data base

The small total of elderly people who participate in studies or treatment programs makes it difficult for researchers to establish a realistic data base, since it gives no true indication of the real extent of the problem of alcohol abuse among the aged. In 1985/86, for example, a total of 10 000 clients participated in the program sponsored by the Saskatchewan Alcohol and Drug Abuse Commission. Of these

clients, 258 persons, representing 3.18% of the entire caseload, were in the "elderly" group, aged 60 years and over, served by our provincial organization. The small percentage of elderly problem drinkers participating in our program reflects two possibilities. First, it reflects that the elderly may be excluded from treatment programs because they have been labelled 'poor risks'. Administrators of treatment facilities may hold that it is not worthwhile to treat persons over the age of 60 or 65. Usually, if resources are limited, preference is given to younger persons, in the belief that a younger person may have more potential for recovery. Secondly, the small number of elderly persons participating in treatment programs may signify that this group is more resistant to currently available programs, which are more or less tailored to the needs of younger clients.

Another problem the researcher faces in attempting to discern the precise extent of problem drinking among the elderly is the abundance of anecdotal evidence, unsupported by hard data, that exists about alcohol abuse in this age group. A number of typical examples follow:

- the older person living alone—the widow, widower or the unmarried person—who has never before had a drinking problem but who, with the onset of aging and isolation, has now acquired a problem;
- the person who has been abusing alcohol most of his/her life and who now, with advancing age, is showing signs of becoming more violent and is posing difficulties for the spouse, for relatives, and for others in their immediate environment, whether that environment is a house, an apartment building, or a nursing home;
- the elderly person living in an institution but going out to the local pubs and repeatedly returning intoxicated;
- the older person accidentally starting a fire, either at home or in an institution, as a result of alcohol and/or drug misuse;
- the "legion syndrome" of the elderly veteran, whether male or female, who spends the evenings at the legion quarters and regularly drinks to the point of intoxication.

A recent statement in *The Seniors Boom*[1] reports an estimate that 2.7 million Canadians are 65 years of age or older; that this figure represents approximately 10% of our Canadian population; and that females outnumber males in this age group. While the general population has increased 2.5 times since 1900, the elderly group has increased seven fold. The fastest-growing segment of the elderly population is that over 75 years of age.

In Saskatchewan, to take one example, there are 130 000 citizens aged 65 years and over, representing 13% of the province's population. The elderly problem-drinker group accounts for 25% of all cases of alcoholic liver disease in Saskatchewan's general hospitals and 20% of all cases of alcohol psychosis in psychiatric hospitals. While this older age group makes up only 11% of Canada's general population, it accounts for 35% of all alcohol-related deaths.

At the present time, an overview of the literature indicates that up

1. Stone L, Fletcher S. *The seniors boom.* Ottawa: Statistics Canada, 1987.

to 10% of the Canadian population over the age of 65 engages in some form of problem drinking. Studies of such institutions as homes for the aged and nursing homes show a corresponding figure ranging between 6% and 20%. The estimates would rise to 40% for residents of institutions managed by the Department of Veterans Affairs. These statistics demonstrate an urgent need for us to look more closely at this age group. Another set of figures that emphasizes the same urgent need for researchers to examine the problem of alcohol dependency in the elderly is found in demographic projections which predict that by the year 2000—only 12 years hence—one of every five Canadians will be over the age of 65. In the second decade of the next century, the "baby boom" generation—Canadians born between 1946 and 1966—will have entered the ranks of our senior population. The seniors' group will then escalate in number, reaching 6 000 000 by the year 2021, and 7 500 000 by 2031. Thus over the next 45 years, Canada's older population is expected to triple in size.

Nature of the problem

Problems of identification

There appear to be two distinct groups of problem drinkers. The first group, which represents two-thirds of the total number, consists of early-onset drinkers who have somehow managed to survive many years of moderate and heavy drinking. The second group, comprised of late-onset drinkers, are those persons who begin to develop alcohol-related problems as they get older, often as a means of coping with the various stresses related to aging.

The enormous task of identification and treatment of elderly, late-onset, problem drinkers begins with the recognition that the problem really exists. For too long the special needs of this group of alcohol users have been largely ignored by all levels of the service network. Older alcoholics have faced particular difficulties in obtaining identification and diagnosis, because of the research findings that multiple pathology is the rule rather than the exception in persons of their age group. In their lifetime, the elderly have accumulated the residual effects of many chronic or recurring illnesses. Late-onset problem drinking makes it difficult to evaluate the degree of alcohol dependency of persons in this compromised state.

The difficulty of identifying the elderly problem drinker derives from a number of factors evident in our society:

- social devaluation of the elderly;
- negative attitudes of some physicians and family members;
- isolation of many elderly persons;
- overlap of clinical indicators of aging and alcohol abuse;
- misidentification of problem drinking outside and inside medical office practice.

Social devaluation of the elderly. It is not in the least surprising that in a society such as ours, attitudes towards the aged constitute flagrant discrimination. Generally speaking, society consigns the elderly to an obscure existence that in most cases has little or no

defined purpose or importance. We belittle them by making false assumptions about their capacity to think and feel as normal human beings. We feel ourselves compromised by their demands for caring, and so we look for ways to transfer responsibility for their well-being to some defined segment of society such as social-service and health-care networks. In short, we try our best to ignore them. Is it any wonder that this quiet sort of discrimination leads to gross and sad neglect to alcohol- and other drug-related problems of this age group.

Negative attitudes towards the elderly. On examining their personal attitudes, many physicians and family members of elderly individuals will find that these do influence their decisions about diagnosis and treatment of alcohol problems in these persons. A question all too often asked is, "Why bother to treat the elderly?" Reasons cited for this indifference include the opinion that the elderly are too old to change or even the illogical suggestion that "It would be too bad to take away their last remaining pleasure." As a result relatives often encourage their elderly family members to drink because the habit keeps them occupied and out of the way.

The "What's-the-use?" attitude of many family physicians who look upon old age and alcoholism as incurable leads to a non-acceptance of the entire task of identification, confrontation, and treatment of elderly persons with a drinking problem. The benevolent paternalism that often accompanies this *laissez-faire* response to the problem encourages premature institutionalization of the elderly and discourages them from exercising their option of remaining in the community.

Isolation. The isolation of the elderly may make it difficult for the physician to make an early identification of problem drinking. A large proportion of the aged live alone, without the support of family and friends, and they are often confined to their home with a physical infirmity of one type or another.

In 1987, Dr. Dorothy Ley, former president of the Palliative Care Foundation and Chair of the CMA's Committee on Health Care for the Elderly, reported[2] that 90% of the 2.7 million Canadians who are 65 years of age or older live in private homes rather than in institutions. Eight hundred thousand, or approximately 33%, live in rural areas. These figures mean that the approach to identifying and dealing with the elderly alcoholic must be quite different from that taken in dealing with the young alcoholic, in the sense that most of the elderly have to be reached in their own homes. Hence the task of early identification falls heavily on the shoulders of outreach social-service and home-care personnel such as public health nurses, social workers, homemakers, physiotherapists, and volunteers: the group of people who go into the homes of the elderly on a regular basis.

These visiting members of the health-care team may provide the

2. Canadian Medical Association. Committee on Health Care for the Elderly. Today's challenges, tomorrow's options. Paper read at the Annual Meeting of the Canadian Medical Association, Charlottetown, 1987.

only hope for early detection of problem drinking in a group of people who have multiple medical and nutritional problems that may be complicated by the use and abuse of alcohol. If their problem drinking goes undetected, increasing isolation of the older problem drinkers may continue for many years until a major crisis occurs forcing them to seek hospital care.

Chart 1
Common Problems Shared by the Elderly and Late-Onset Problem Drinkers

- Memory loss;
- Confusion;
- Depression;
- Multiple medical problems;
- Unsteadiness of gait;
- Increased accident proneness as shown by unexplained cuts and bruises, old healed and new fractures;
- Loss of family and friends;
- Irritability;
- Insomnia;
- Sexual dysfunction;
- Malabsorption;
- Anemia;
- Pancreatitis;
- Cardiovascular toxicity;
- Declining immune response;
- Gross neglect of self and home;
- Malnutrition;
- Compliance problems in use of prescription and over-the-counter drugs;
- Gross denial when confronted with problem drinking.

Overlap/misidentification of clinical indicators. Clinical indicators that are used to identify the younger alcoholic are very similar to problems unrelated to alcohol that can occur in the aging. This similarity leads to frequent misidentification of late-onset alcohol problems. Chart 1 lists symptoms that are very common both in the aging and in late-onset problem drinkers. The alcohol components of the problem may be missed completely unless the drinking is specifically observed or the person is obviously seen to be intoxicated. The older person will often resort to complete denial of any drinking and/or drug-related incidents which are really an integral part of the disease called "alcoholism." If the physician tries to break through that denial too quickly, the patient may refuse any further contact. It is wise, therefore, to refrain from attaching any label such as "alcoholism" or "alcoholic" to the patient. Instead the physician should discuss with the patient medical problems, behaviour problems, and emotional problems related to problem drinking. Patients are likely to accept a diagnosis of problem drinking only when the physician can identify

and positively link their physical, emotional, and behavioural problems to their alcohol consumption.

The office-practice setting is not conducive to early identification of an elderly person's problem drinking. Many medical schools provide only a total of six to eight hours of training in the identification of alcoholism, and only one of 16 Canadian medical schools requires students to take training in geriatric medicine. Nevertheless, as family physicians, we must remember that more than 33% of the non-institutionalized population over the age of 65 visits our office at least once a month. These facts should suggest the vital role that the medical profession could play by discovering problem drinking earlier rather than later. Chart 2 lists a number of questions that might help the family physician to identify substance-abuse problems in elderly patients.

The CMA's Committee on Health Care of the Elderly recommends[2] that all residency programs in family medicine include mandatory rotations in geriatric medicine. I would also recommend rotations in a chemical-dependency program. Our way of dealing with this whole area obviously has to be improved upon so that we family physicians can develop skills that will enable us to diagnose and identify problem drinking at an earlier stage.

Chart 2
General Questions for Identifying Substance Abuse in the Elderly

- Do you drink beverage alcohol? How much and how often?
- Are you taking any medication? How much and how often?
- What kind of beverage alcohol or non-beverage alcohol are you using?
- What sort of predictable control have you over your intake of this beverage?
- In what situations do you use the beverage?

Assessment techniques for effective intervention

Quality-of-life indicators

At a 1987 workshop in Regina, Dr. Sarah Saunders of the Addiction Research Foundation of Ontario proposed an outline for evaluating quality of life by means of a general assessment of significant factors (Chart 3).[3]

The factors that serve as quality of life indicators include state of physical and emotional health, presence or absence of a supportive

3. Saunders S. Paper read at Alcohol Addiction Workshop, Regina, 1987. Toronto: Addiction Research Foundation of Ontario, 33 Russell Street, Toronto, Ont. M5S 2S1.

social network, and financial and legal status. Chart 4 suggests topics which the family physician might discuss with elderly patients during an office visit to assess their quality of life and help determine whether an elderly patient has a substance-dependency problem that may affect their well-being.

Useful laboratory "markers"

Several laboratory tests are available to support the diagnosis and follow-up of patients in whom an alcohol problem has been identified. Chart 5 lists a number of laboratory investigations and findings that may show an alcohol dependency.

Increased mean corpuscular volume

The finding of a mean corpuscular volume (MCV) of over 100 should make the family physician highly suspicious of the presence of a nutritional deficiency that calls for assessment of vitamin B^{12} and folic acid. If the results of both these tests prove to be normal and there is no evidence of anemia, a high MCV should be attributed to alcoholism until another cause is identified. Since the lifetime of a red blood cell is approximately four months, the MCV is slow to return to normal after a person stops drinking. This particular finding is a reflection of chronic alcoholism and is certainly not a result of the occasional episodic bout of acute intoxication.

Iron-deficiency anemia is often found in association with poor nutrition, and a depression of platelets with thrombocytopenia is not uncommon in chronic alcoholics. This condition may serve to explain earlier, multiple, unexplained episodes of general bruising, particularly of exposed areas subject to trauma, such as the legs and arms.

Liver function

The liver-function tests are self-declaratory. They can usually identify very quickly a stage-1, -2, or-3 alcoholic liver disease: that is, the fatty liver, the alcoholic-hepatitic liver, and the alcoholic-cirrhotic liver. One of the most sensitive tests is the GGT (gamma glutamal transpeptidase), which can indicate enzyme induction produced by a chronic alcohol intake. Normal levels are in the 0-50 range in women and the 0-70 range in men. In people who have been drinking alcohol surreptitiously for a considerable period of time, it is not uncommon to find readings as high as 300-1000. Because of the long half-life of this enzyme, it may take weeks to months for its level to return to normal after drinking is discontinued. Other enzyme-inducing drugs, too, will elevate this particular enzyme.

Cardiomyopathy

The cardiogram of a problem drinker may show a left-axis deviation with cardiac enlargement. Signs of conduction and rhythm defects should raise concern about a possible underlying alcohol problem.

Rib fractures

An X-ray may confirm an abnormal cardiothoracic ratio and may also show some old, healed, rib fractures for which no medical treat-

ment has ever been sought. These old untreated fractures without a confirmatory history suggest gross neglect, possibly resulting from the total analgesic effect provided by abuse of alcohol and/or other drugs.

It is wise to keep in mind, however, that the findings of laboratory investigations should be interpreted very cautiously. The physician should share the findings with the patient and ensure that the patient is clearly aware of their significance in relation to his or her medical status. I usually have my patients come in once a month after they have stopped drinking in order to monitor the course of various laboratory markers that I have noted previously. As a form of biofeedback for positive reinforcement, I generally share with them the improvement reflected in these laboratory investigations.

Chart 3
Quality of Life Indicators

- Nutritional status
- General health screening
- Use of leisure time
- Employment, retirement, education, history
- Financial status
- Legal status
- Housing
- Spiritual state
- Activities of daily living
- Marital status
- Family status
- Social contacts
- History of the use and abuse of alcohol, prescription and over-the-counter drugs.

Treatment for alcoholism in the elderly

Community services

Most Canadian communities offer services for the elderly which can give them more opportunities to participate in peer-group activities and increase their social interaction. Use of these opportunities can contribute to a better response to treatment and a higher recovery rate for the elderly alcoholic.

Additional support can be found in various self-help senior-citizens groups available in many communities. I have generally found, however, that mandatory AA attendance may not be appropriate for elderly persons because they may find it difficult to relate to the younger individuals who make up a larger proportion of the attendance at those meetings.

I firmly believe that there is need to develop co-ordinated, community-based, substance-abuse programs for the elderly. Such programs could prevent fragmentation of the services available and ensure that the patient is not shuttled back and forth between different agencies to no advantage.

Community service projects of this type were first developed in Toronto and Ottawa in 1973. The Toronto project, A Community Older Persons Alcohol Project (COPA) was developed under the direction of Dr. Sarah Saunders of the Addiction Research Foundation of Ontario. Dr. Saunders recognized that the approach to identifying and dealing with the elderly alcoholic must be quite different from that taken in dealing with the young. She observed that an effective approach to the elderly must be based on their lifestyle and must take account of the multiple medical and nutritional problems from which many of them suffer. These circumstances dictated that most elderly persons be reached in their own homes. Hence public-health nurses and social workers are likely to be the first persons to become aware of the needs of these patients.

Many of these elderly people had multiple medical and nutritional problems, which also dictated a whole different approach. COPA thus became a highly individualized and time-consuming program which evidently achieves results, though it does not insist on the participants' absolute abstinence.

Chart 4
An Office Approach to Determining an Elderly Patient's Quality of Life

Topic for Discussion	Relevant Question(s)
Physical health:	Has the patient medical problems related to alcohol consumption? Does the patient continue to drink despite medical advice to the contrary?
Emotional health:	Has the patient mental problems related to or exacerbated by alcohol consumption?
Support network:	Has the patient alienated family and friends because of drinking? Is the patient unable to participate in usual social activities because of drinking?
Financial status:	Has the patient had financial difficulty but continued to purchase alcohol while living on a marginal income? Is the patient incompetent in managing money? Has the patient major debts? How much does the patient spend on alcohol weekly?
Legal status:	Is the patient currently having legal problems relating to drinking, such as charges of driving while impaired, being intoxicated in public places, or committing petty thievery (e.g., shop-lifting)?

Another such program, "A Substance Abuse Program for the Elderly" operates in Tampa, Florida, under the direction of Dr. Thomas Morosko of the Florida Mental Health Institute. This program, which is sponsored by the University of South Florida, includes eight components:

- an outreach network for early identification of elderly substance abusers;
- available emergency care;
- detoxification facilities;
- means of comprehensive assessment, treatment planning, and referral;
- supportive counselling and case management;
- back-up in-patient, day-care, and day-treatment programs;
- use of other community resources;
- adequate follow-up and aftercare.

The Florida program was designed to:

- increase the knowledge of the elderly about medications;
- recognize trigger situations, tolerance ceilings, and attitudes that lead to substance abuse;
- promote, where possible, understanding of the consequences of alcohol and medication abuse;
- help participants to learn skills, make friends, and rebuild social networks;
- help participants learn to cope with their emotional problems;
- provide information about, and better use of, community resources.

The project provides a half-day out-patient program that teaches the ABCs of substance abuse. It covers:

- circumstances that lead to substance abuse;
- behaviour that results from substance abuse; and
- general consequences of substance abuse.

The role of the family physician

The family physician has an important role to play in prevention, intervention, and treatment for elderly alcoholics. These people do not usually require medical detoxification to the same extent as younger alcoholics, since the elderly cannot consume as large a volume of alcohol as can younger people. Nevertheless, the effects on elderly persons of consuming even a small amount of alcohol can be quite severe because of:

- the greater sensitivity of their nervous system;
- their diminished capacity to metabolize alcohol and other drugs;
- the interaction of alcohol with prescription drugs and over-the-counter drugs.

Chart 5
Investigations/Findings of Alcohol Dependence

- MCV greater than 100, accompanied by normal levels of B^{12} and serum folic acid;
- CBC and total platelets;
- SMAC 20, including serum GGT;

- Serum CPK (creatinine phosphokinase) and amylase;
- Serum T4;
- Serum uric acid;
- Serum HDL;
- Total cholesterol and HDL ratios;
- Random blood alcohol studies;[a]
- Serum fasting blood sugar: 11:00 a.m. and 3:00 p.m. blood sugars to determine the presence of impaired glucose metabolism;
- Electrocardiogram;
- Chest X-Ray.

a. Random blood alcohol levels at scheduled doctor's appointments with no apparent impairment between levels of 17-30 mmol/L. 1mmol = 4.6 mg/100; 17 mmol = 78.2 mg/100 of alcohol, and 30mmol = 138 mg/100.

The family physician who undertakes a patient's medical detoxication may prescribe very small amounts of benzodiazapines on a short-term basis in a controlled environment. Fluid intake and output should be monitored, and special attention should be paid to the patient's potassium levels, which may often become depleted. The patient should be provided with appropriate vitamin supplements. These supplements should contain ample amounts of thiamine (50-100 mg daily), particularly if there is evidence of peripheral neuropathy or if there are any early signs of Wernicke-Korsakoff's syndrome. Agitation and hallucinatory states can be controlled with a combination of Haldol and Cogentin.

When the patient has been detoxified, the physician should try to modify his or her environment by arranging for stronger social support. A referral can then be made to an appropriate treatment agency located in the community. The physician might be able to provide leadership in the development of a method of case conferencing, which might be critical, at this particular time, to ensure that the whole system is working as effectively as possible.

The physician can also play an important role in secondary prevention of alcohol abuse. This can be a major responsibility for a physician who is treating an elderly patient with an alcohol problem. The physician should engage in frank discussions with the patient's family about his or her concerns. Life stresses should be identified and treated as problems to be solved by the physician, the family, and the patient, working together.

On a broader scale, the physician should also explore the role he or she might take as an educator. For example, a physician with an interest in geriatrics might serve as a consultant to senior-citizens homes or community hospitals, where education could be offered to both staff and patients about alcoholism and its prevention.

Conclusions

Since our aging population is growing in numbers and alcohol use and abuse are such ubiquitous phenomena in our society, there is need for thoughtful awareness that a problem exists, and that it should be of concern to all persons working in the field of gerontology. Recent

reports on the possible benefits of alcohol in increasing levels of high-density lipoprotein, prolonging life, and decreasing the incidence of cardiovascular death make reviews of the interaction of aging and alcohol use and abuse particularly timely.

Careful consideration of the community-based approaches of substance-abuse programs now in place for the elderly both in Canada and in the United States may be helpful for the future planning of additional programs. Other components which it might be useful to include in the programs of the future are the development of a core of volunteers to provide transportation to elderly participants and the use of religious and spiritual support groups.

I must also make a plea for family physicians to accept the responsibility of offering their services as facilitators in the earlier detection of alcohol problems among the elderly; as educators in spreading more information about the needs of the elderly and the particular hazards they face in relation to substance abuse; as co-ordinators of the community services that must be organized to support the comprehensive multidisciplinary approach required to meet the complex needs of our elderly citizens.

Certainly, through facilitating prevention, early detection, intervention, and treatment, the family physician can help enormously to ensure the proper treatment of alcoholism in the elderly. In this way they can support a total team effort to provide a continuum of care that will restore to the elderly the respect and dignity to which they are entitled.

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Youth Treatment Issues: A Sampling of the Latest Literature

Saskatchewan Alcohol and Drug Abuse Commission,
Evaluation & Research, January, 1987

Preface

Since the Minister's Advisory Committee on Alcohol, Drugs and Youth (M.A.C.) released its final report in May of 1986 there has been considerable debate and discussion regarding the issues of alcohol, drugs and youth. In September under the aegis of the Premier's Initiatives many of the MAC recommendations were acted upon. A youth treatment facility was one of the MAC recommendations included in the Premier's announcements. A steering committee is currently involved in developing a youth treatment program to be implemented at Whitespruce Forces Base near Yorkton.

This paper is a brief assembly of some of the literature discussing the major issues involved in alcohol and drug treatment for adolescents.

Introduction

Adolescence is a difficult time for adolescents and parents. Youth are at increased risk physically and psychologically, yet it is a necessary and important stage to go through. It involves a necessary separation from parents and family; a severing of apron strings. Risk taking, exploration and experimentation are part of this process.

In addition, the average "normal" adolescent is a mass of contradictory feelings and emotions.

> The adolescent lives in an atmosphere of great anxiety, high elation, deep despair, quickly rising enthusiasms, utter hopelessness, burning—or at other times sterile—intellectual or philosophical preoccupations. The yearning for freedom, the sense of loneliness, the feeling of oppression by parents, the impotent rages or active hates directed against the adult world, the erotic crushes—whether homosexually or heterosexually directed—the suicidal fantasies, etc.
>
> (Anna Freud cited in Amini & Salasnek, 1975)

The combination of this highly volatile time of life and the initial introduction of, and experimentation with, alcohol and drugs creates a potentially dangerous situation.

The last ten years have seen a vast increase in treatment resources for alcohol and drug abusing adolescents.

Partly resulting from the confusing nature of adolescence, partly from different philosophies of treatment experts and partly from historical precedent the youth treatment field offers a virtual plethora of treatment models ranging from highly restrictive to very unrestrictive,

from intense to loose, from voluntary to forced, from long term to short term, etc. Not surprisingly, all models claim effectiveness.

Surprisingly, there is a dearth of evaluation on youth treatment models.

> While the need for service is undeniable, the rapid growth and expansion of such diverse facilities has not been matched by an equal expansion in theoretical understanding and seems to represent the lack of one clearly superior method of treatment.
> (Amini & Salasnek, 1975)

Recently, restrictive approaches have become the more popular and publicized philosophies of youth treatment. Tough love is an example of the restrictive and confrontative extreme of youth treatment philosophies. However, in terms of program numbers, the restrictive approach to youth treatment represents a small minority of youth treatment programs. It is important to keep in perspective that the restrictive, confrontative extreme in youth treatment philosophy is a minority position.

The following pages provide excerpts from pertinent literature in the youth treatment field organized around the major points of contention among those involved in youth treatment.

A. Length of treatment

Research on the relationship of treatment length to treatment outcome is almost entirely within the area of adult treatment services. In adult treatment there is little agreement whether the chances of recovery improve with longer term treatment. The following excerpts bear witness to the contradictory nature of the literature in the area of treatment duration.

- Annis (1985/86) argues that there is no empirical basis to most lengths of inpatient treatment and that there is no significant difference in outcome between short term and longer term care:

  > Historical precedent and unsubstantiated clinical impression appear to play a larger role in determining length of inpatient programming in most settings than reliance on empirical evidence.
  >
  > No significant difference in outcome has been reported for patients randomly assigned inpatient alcoholism programmes of 3 week versus 5 week duration, 3 week versus 3 month duration, or even 9 day versus 1 month duration.
  > (Annis, 1985/86)

- Holland and Griffin (1984) while arguing the importance of residential drug free treatment for both adolescents and adults admit that long term care is the last resort for seriously involved drug abusers:

  > . . . long-term residential programs are considered the treatment of last resort by many . . .
  > (Holland & Griffin, 1984)

- Welte et al. (1981) argue that treatment duration is positively related

to outcome, but only for socially unstable clients. In addition, in reviewing the literature, they present various authors who argue that length of treatment and outcome are not related:

— Ritson found no correlation between length of stay and outcome.
— Willems et al. found no significant difference at follow-up.
— Edwards found no difference at follow-up between clients who had received only one session of advice and those who had received the full spectrum of services.

On the other hand, the Welte et al. research showed somewhat different results:

> Follow-up at 3 and 8 months after inpatient alcoholism treatment showed that patients who stayed in treatment longer were more likely to abstain or drink less.
>
> . . . length of stay in treatment had no effect on alcohol consumption among patients with high social stability, but among patients with low social stability, consumption decreased considerably as length of stay increased.
>
> (Welte et al., 1981)

The Youth Treatment program profiles contained in Alcohol Health and Research World in the summer of 1983 described programs ranging from 28 days to 18 months. There was little justification for the particular length selected for any particular program. The longer term programs tended to be quasi-outpatient (Straight) or therapeutic community models (JANUS).

B. Family involvement

There is almost unanimity on the importance of family involvement in the treatment of adolescents. Some disagreement exists on the form that this involvement should take: some researchers argue that the family is sick and should be treated; some argue that parents are valuable allies and assistant counsellors in the treatment of adolescent substance abuse.

- Baither (1978) stresses the importance of the family in causing and curing substance abuse:

  > . . . family disturbances are a major influence on the abuser's life . . . the family is important in developing the problem, therefore important in modifying it . . . family problems must also be dealt with . . .
  >
  > (Baither, 1978)

- Boyd (1975) also emphasizes the importance of adult-adolescent relationships:

  > . . . the ultimate secret in the treatment of the drug addicted youngster lies in the capacity of both adult and youngster to be important to each other . . .
  >
  > (Boyd, 1975)

- Ellis (1984) discusses the differing views of parent involvement among inpatient counsellors:

  > The common attitude . . . among inpatient counsellors is that parents are part of the problem, and are as "sick" as their dependent children . . . the parents become "co-dependents" . . . This attitude undermines their potential for gaining a more respectable status.
  >
  > — parents are not viewed as co-counsellors
  > — all they require are certain skills to enable them to assist in treatment
  >
  > If counsellors and parents can work as a team, forming clear strategies and offering mutual support, then they can present a powerful force to the patient.
  >
  > (Ellis, 1984)

- Turanski (1983) argues that parent involvement should not be forced:

  > Parental involvement should occur when it is appropriate and when youth are willing to have this involvement. But, if it is forced the program may have difficulty in reaching the youngsters.
  >
  > (Turanski, 1983)

- All of the programs profiled in *Alcohol Health and Research World's* summer of 1983 Youth Treatment edition included some form of parental/family involvement.

C. Level of treatment restrictiveness and intensity

As with most other aspects of youth treatment levels of restrictiveness and intensity vary from program to program. Unfortunately, again there is a gap in research regarding the relative efficacy of varying levels of intensity and restrictiveness.

- Boyd (1975) argues that it is unprofitable to force adolescents into inpatient treatment:

  > It is unprofitable in this setting (inpatient) to accept a youngster against his will; admission can only be effective if he wishes to come in for his own sake.
  >
  > (Boyd, 1975)

- Reese (1974) believes that you must force adolescents into treatment:

  > . . . the value of forced abstinence and treatment in an inpatient setting is not clear as yet. Still, inpatient care probably must be prescribed for humanitarian reasons. It is the only possible course of action, and slow suicide is no better than fast suicide.
  >
  > (Reese, 1974)

- Filstead and Anderson (1983) maintain that a range of settings of

varying intensities is required. Further, they argue that assessment must place adolescents in the most appropriate setting:

> Especially with adolescents, a system of care that is available in different settings, which represents varying intensities, that has specific criteria for determining what services in which settings are most appropriate, and is coordinated in order to maximize the "system" nature of care are fundamental principles to the organization and delivery of treatment services for adolescents.
>
> — No locked units
>
> (Filstead & Anderson, 1983)

- Gottheil et al. (1977) argue that adolescent substance abusers respond well to treatments involving "softer" approaches:

> . . . we found that these generally non-verbal patients (adolescent substance abusers) responded particularly well to treatment modalities designed to elicit expressiveness and communication such as art, music, recreation, and role playing therapies with video tape playback.
>
> (Gottheil et al., 1977)

- The Youth Treatment: Program Profiles (Alcohol Health and Research World, 1983) present the range of treatment models available. Straight Inc. appears to be the most restrictive, while JANUS is one of the less restrictive programs:

> It should be noted that Straight Inc. in its highly confrontive approach, differs strikingly from most of the other programs profiled.
>
> When clients enter . . . (Straight) . . . they surrender all privileges . . . . New clients' bodies and clothes are thoroughly searched for drugs. They are deprived of money and identification, cannot receive phone calls or letters, and cannot read, watch television, or listen to the radio. They have no privileges, and are actually escorted everywhere by the belt loops to indicate that they are not trusted.
>
> The JANUS staff lay down few rules, and encourage residents to work out many aspects of their living requirements on their own, to teach negotiation, compromise and responsibility.
>
> — residents encouraged to establish rules (eg., bedtime) as a group.
>
> (Program Profiles, 1983)

- The Canadian Medical Association in its submission to the Standing Committee on Justice and Legal Affairs (January, 1985) argues that treatment cannot be coerced and implies that there must be a choice or decision made by participants:

> Alcohol addiction/dependency is a complex condition that does not lend itself to cure by coercion. Alcoholism is a disease of addiction and as in other drug dependencies, motivation is an important element of treatment; coercion may negate this.
>
> (C.M.A. submission, 1985)

D. Spectrum or range of services required within a treatment program for youth

Most treatment programs for youth include alcohol and drug education and counselling and other related services; most advocate a holistic approach. However, some authors continue to argue an alcohol/drug only or first position.

- Hawthorne and Menzel (1983) argue the alcohol first or "proven adult model" position:

> . . . it seems premature to call for treatment strategies that address broad behavioural syndromes that may, in fact, be caused initially by excessive alcohol intake. Treatment that follows the proven adult model—stopping the drinking first, followed by efforts to eliminate remaining problems—appears to be a reasonable approach in light of current knowledge.
> (Hawthorne & Menzel, 1983)

- Turanski (1983) argues for the holistic approach in addition to a youth centre concept to enable non-stigmatized access by youth:

> Providing alcohol treatment within the context of a youth centre has another appeal to young people. It provides non-stigmatized access to alcohol services.
>
> Experience has indicated that the availability of a comprehensive range of services and activities is essential for effective treatment for youth . . .
>
> Availability of basic professional services such as mental health, and social, legal and career counselling . . . (are necessary). Through the appropriate use of these services as part of therapy, the basic areas of breakdown in a young person's life can be resolved in a practical manner.
>
> Only by resolving basic life problems or needs can further levels of insight and growth be facilitated and alcohol given up as a coping mechanism.
> (Turanski, 1983)

- Youth Treatment Program Profiles (Alcohol Health and Research World, 1983) maintained that most of the successful programs use the holistic approach and did not refer to themselves as drug programs:

> Many of the drug abuse treatment programs that were deemed to be successful in serving young people, looked upon drug abuse as a symptom of other life problems, did not limit their services to drug abusers, and did not refer to themselves as drug agencies.
>
> . . . most programs maintain the traditional holistic focus with a variety of activities designed to strengthen decision making or coping skills.
>
> . . . Virtually all have an education component and many emphasize vocational skills.
> (Program Profiles, 1983)

E. Other considerations

Evaluation

All authors argue that there is a lack of evaluation on the efficacy of youth treatment approaches and therefore it is difficult to design a youth treatment program on the basis of the empirical evidence.

> . . . we know very little about the youth who come in contact with alcoholism or substance abuse treatment facilities. Furthermore, the treatment that has been developed for adolescents typically represents a modification of adult treatment programs. It is not surprising that the field starts with what it thinks works . . . In many ways this process has prevented the issue of treatment services for adolescents from being examined in its own right . . .
> (Filstead & Anderson, 1983)

> . . . there is no conclusive evidence of the relative effectiveness of any one treatment approach with adolescent substance abusers . . .
> (Holland & Griffin, 1984)

> The literature on the evaluation of treatment and rehabilitative methods and approaches for youthful drug abusers is limited . . . thus far there has been a failure to design and test distinct treatment models . . .
> (Program Profiles, 1983)

> Improving outcome research is closely linked to the development and maintenance of treatment programs. An important aspect of such improvement will no doubt be increased emphasis on truly integrating outcome evaluations into treatment programs . . . our sense is that outcome evaluations are conceived and/or seen as appendages of treatment programs. Unless evaluation becomes an integral part of the treatment process, both the research and the treatments themselves may be seriously hampered.
> (Goldstein et al., 1984)

Inpatient/Outpatient

The debate continues on the relative effectiveness of inpatient and outpatient treatment. A similar debate rages in the area of youth treatment: some authors argue that only outpatient treatment is required; some argue a spectrum of service is required; others argue that inpatient treatment is necessary for most clients.

- Boyd (1975) describes the purpose of inpatient care:

  > The purpose of inpatient care is to work more closely with a youngster when outpatient care is clearly insufficient.
  > (Boyd, 1975)

- Filstead and Anderson (1983) argue that a range of service is necessary and that assessment must place clients appropriately within the range:

  > . . . a system of care . . . available in different settings . . . (representing) varying intensities, that has specific criteria for

> determining what services in which settings are most appropriate and is coordinated . . . are the fundamental principles to the organization and delivery of treatment services for adolescents.
> (Filstead & Anderson, 1983)

- Reese (1974) maintains that inpatient treatment is the answer for unwilling young clients:

> . . . it would be pointless to offer outpatient treatment to a youngster who is totally immersed in the drug scene, who is forced into therapy by others and who has no wish to change . . .
> (Reese, 1974)

- Carolann Kane (1983) maintains that treatment must by and large take place in the community (although a short term "shock" inpatient stay might be o.k.):

> If you send a youngster away for 3 months to a 'perfect environment' that might help for a while . . . but they're still going to have to come back and face problems they left behind. Although I think a short residential experience might be a good way to shock an adolescent who needs help, I think it's very important to base the treatment in the community where the real problems can be examined on a daily basis.
> (Carolann Kane, Program Director, Woodbridge Action for Youth, cited in Program Profiles, 1983)

- Annis (1985/86) found that inpatient treatment is not more effective than outpatient treatment:

> — in-hospital alcoholism programmes of a few weeks to a few months duration show no higher success rates than periods of brief hospitalization of a few days — the majority of alcoholics can be detoxed on an ambulatory basis — day treatment is equal to or better than inpatient — outpatient is as good as inpatient — if clients could be appropriately assigned to an appropriate treatment milieu outcome rates would improve.
> (Annis, 1985/86)

- Amini et al. (1982) found that drug abusing delinquents are not more likely to improve in an inpatient over an outpatient setting:

> Seventy-four delinquent drug abusing adolescents were randomly assigned to inpatient or outpatient treatment. One year results on several measures of social functioning as well as MMPI scores . . . no significant differences in outcome are noted on these measures.
> (Amini et al., 1982)

Summary

Youth Treatment models vary greatly. Length of inpatient care ranges from very brief to extremely long term care with little evidence on the relative benefits of longer duration treatment to treatment outcome. All models favour some form of family involvement — although the focus of this involvement varies from co-dependent to

co-counsellor. Treatment intensity also varies widely, again without empirical backup. Most experts agree that youth treatment should involve a holistic approach, although some continue to argue an alcohol only approach.

All experts agree that more and better evaluation needs to be done in order that debates around these youth treatment issues may be based on empirical evidence and hopefully move youth treatment programs in the right direction.

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Highlights: An Overview of Registered Indian Conditions in Saskatchewan*

George K. Jarvis

under the direction of N.H. Lithwick,
Lithwick Rothman Schiff Associates Ltd.

1. Introduction

— This document considers the conditions of registered Indians in Saskatchewan using data from the 1981 Census, the Indian Register and from other relevant sources in the Government of Canada. It examines the situation of on- and off-reserve registered Indians and compares this with the situation of a "reference population". This generally consists of the total Saskatchewan population less registered Indians, although in certain cases the total provincial population is used. To facilitate reading, we have often used the word "Indian" to denote registered Indians.

2. Demography

— In Saskatchewan, 66 per cent of Indians lived on-reserve in 1986, less than the average of other provinces and territories except British Columbia.

— Registered Indians increased in number from 38,151 in 1971 to 51,140 in 1981 and 59,477 in 1986. By 1991, a further increase of 9,000 is projected.

— Registered Indians comprised 5.7 per cent of the total Saskatchewan population in 1986, up from 4.1 per cent in 1971. A further growth of 0.5 per cent is projected for 1991.

— During the recent past, the off-reserve population increased faster than the on-reserve, thereby decreasing the share of Indians who lived on-reserve. This trend is expected to stabilize, however.

— According to the 1981 Census of Canada there were 40,130 registered Indians in Saskatchewan, 12 per cent of the Canadian total. Registered Indians accounted for 67 per cent of the Native population in Saskatchewan in 1981.

— Saskatchewan's 141 reserves were the third largest in Canada, averaging just under 10,800 acres per reserve and containing the third highest total acreage.

— Indians in Saskatchewan enjoyed moderately good access to urban centres compared with other provinces. Fully 82 per cent of Saskatchewan's Indian population was classified by INAC as living

*Excerpted from *An Overview of Registered Indian Conditions in Saskatchewan*, Dept. of Indian and Northern Affairs, 1987, pp. vii-xiv. Reproduced with permission of Supply and Services Canada.

in a rural location, that is, located between 50 and 350 kilometres from the nearest regional centre.

— Largely as a result of high fertility the Indian population was more youthful than the Saskatchewan population as a whole. The proportion of Indians aged zero to 14 is projected to decline by 1991 but it is still expected to be 18 percentage points higher than the proportion in the total Saskatchewan population.

— Saskatchewan received approximately as many Indian migrants as it lost to other provinces during the last few years. Overall, the proportions of Indian and non-Indian movers and migrants were very similar. Generally speaking, Indians who lived on-reserve were less likely to have moved during the past five years than those living off-reserve.

— The smaller proportion of zero to 14 year-old Indians will result in a decline in the dependency ratio of 17 per cent from 1971 to 1991, although the Indian ratio will still be higher than the total provincial dependency ratio by just over one-third.

— Indians in Saskatchewan had higher standardized death rates than the total provincial population, as well as higher age-specific death rates in every age category.

— Indian life expectancy in Canada was approximately 10 years less than that of the total Canadian population, but in recent years the difference has been decreasing. Most progress in Indian life expectancy has occurred at the younger ages.

3. Families and households

— Registered Indian census families in Saskatchewan were larger than non-Indian census families, 4.4 versus 3.3 members. Moreover, Indian census families were larger on- than off-reserve, 4.7 versus 3.9 members.

— Greater numbers of children among Indian census families were largely responsible for these differences. There were, on average, twice as many children per Indian than non-Indian census family, 2.7 versus 1.3, respectively.

— As well, the family structure in which Indians live was generally different, with proportionally more children and other relatives living with families, and more lone-parent situations than was the case among non-Indians. In fact, lone parents in census families were almost four times as common among registered Indians than in the reference population.

— More than twice as many non-Indians than Indians in economic families were spouses, 54 versus 24 per cent, while over one-half more Indians in economic families were children under 15 years of age.

— There were also proportionally more single persons, individuals who were separated, widowed or divorced, and persons living common-law among Indians than among other residents of Sas-

katchewan. More Indians living off-reserve were separated, widowed, divorced or living common-law than among the on-reserve population.

4. Language

— English was the mother tongue for more than one-half of the Indians in Saskatchewan. Few who began life speaking English changed this language for another.

— Forty-two per cent of Saskatchewan's registered Indians began life with an aboriginal language as mother tongue. In 1981, 28 per cent used English as the principal language in their homes.

— Those who were very young, very old and those who lived on-reserve were most likely to resist the tendency toward linguistic assimilation.

5. Health

— Mortality was generally higher among Indians than among the total Saskatchewan population from most major causes.

— Some of the most important differences were in the violent causes of death with Indians in Saskatchewan suffering higher rates of death by accident than the total Saskatchewan population for every category except exposure and falls.

— Indians had higher rates of suicide than the rates for residents of Saskatchewan as a whole for every age group except the oldest, 65 years of age and over. The Indian rate for those aged zero to 19 was over six times higher.

— Indians have a history of frequent infant death and high tuberculosis incidence, but definite improvements in these conditions have been made during the last few years.

6. Education

— Indian children were more likely to be in grades which were inappropriate for their age.

— Enrolment in band-operated schools more than doubled between 1978-79 and 1982-83, reaching 35 per cent of registered Indian students.

— As was the case among other Canadians, younger Indians had higher levels of educational attainment than older Indians, although at all ages Indians were less educated than non-Indians.

— Proportionally more Indians than non-Indians in Saskatchewan were "functionally illiterate", that is, had less than Grade 9 education, 49 versus 22 per cent, respectively. On the other hand, more than twice as many non-Indians as Indians, 44 versus 20 per cent, had achieved high school completion or more.

— Sixteen per cent of non-Indians had at least some university compared with six per cent of Indians.

— Off-reserve Indians attended school more often than on-reserve Indians and also achieved higher levels of education.

7. Employment and income

— Participation in the labour force was much lower for Indians than for non-Indians in Saskatchewan. Under-participation was most pronounced among those at the younger and older ends of the age distribution, and for relatively uneducated persons living on-reserve.

— The employment rate for Indians was just slightly higher than one-half the non-Indian rate, 32 versus 61 per cent, respectively.

— Full-time employment for Indians was less likely in primary than in secondary or tertiary occupations. Overall, Indians were proportionally more than twice as likely as non-Indians not to work at all, nine versus four per cent. They were slightly less likely to work both full and part-time.

— In 1980, 27 per cent of Indians reported no income, almost double the non-Indian proportion of 14 per cent.

— Average individual 1980 Indian income was about $6,400, just over one-half the corresponding non-Indian level of $12,600.

— In virtually all occupations Indians received less than non-Indians. However, those who were more educated tended to receive more, especially Indians who had moved from the reserves.

— Income levels were lower for Indian females than for males in similar occupations; they were also lower for Indians living on-reserve than for those who were off-reserve.

— Although Indian females received less than Indian males, they were closer to those Indian males in income than non-Indian females were to the income of non-Indian males.

— Indians were proportionally about two and one-half times more likely to have indicated government transfer payments as their major source of income, 32 versus 13 per cent. Indians living off-reserve were more likely than Indians on-reserve to report employment income and less likely to report government transfer payments as their major source of income.

— Overall, about three and one-half times the proportion of non-Indian than Indian economic families received 1980 income of $30,000 or more. On the other hand, Indian economic families received under $5,000 at almost five times the rate of non-Indian families, 19 versus four per cent.

8. Housing

— By every measure, Indian housing was generally inferior to non-Indian housing. On-reserve housing was more often especially inadequate.

— Indian households tended to occupy their dwellings for much shorter periods of time than non-Indian households. On-reserve Indian households remained in their dwellings longer than off-reserve households. For example, the proportion of on-reserve households occupying their dwellings for more than 10 years was about four and one-half times the off-reserve proportion, 26 versus six per cent.

— Although home ownership data on-reserve are questionable, the data show that a larger proportion of on-reserve Indian households owned their homes (communally among the band) than non-Indian households, 83 versus 73 per cent. Off-reserve Indian households, however, showed only a 30 per cent ownership proportion.

— Saskatchewan's off-reserve households paid a higher proportion of household income for major owner's payments and gross rent than did non-Indian households.

— The residential housing stock of on-reserve Indians was generally the newest. For example, 56 per cent of on-reserve dwellings were built between 1971 and 1981 compared with 32 per cent of non-Indian dwellings.

— Despite their relative newness, on-reserve dwellings were in comparatively inferior condition. More on-reserve dwellings were crowded (almost one-half), in need of major repair (just over one-quarter), lacked central heating (over two-thirds) and lacked a bathroom (over three-fifths). By contrast, for example, only six per cent of off-reserve dwellings lacked a bathroom and only two per cent of non-Indian dwellings were crowded.

9. Social services

— The number of registered Indian children adopted in Saskatchewan increased considerably between 1971 and 1981, and more recently more of these children have been adopted by Indians.

— The number of Indian adults in residential care among registered Indians on-reserve or on-Crown land has also increased somewhat in the last couple of years.

— Although these changes represented increased use of social services, other services such as Indian children in care and social assistance on-reserve and on-Crown land did not increase in the later years. The number of Indian children in care on-reserve and on-Crown land has actually decreased.

10. Justice

— North American Indians comprised approximately one-third of the total federal inmate population of Saskatchewan over the 1974-1983 period.

— There has been an increase in incarcerations among both North American Indians and non-Indians, with Indians increasing slightly more.

— Indians who served sentences, both male and female, were somewhat younger than average in the prison population.

— North American Indians in Saskatchewan were more likely to have served multiple prison terms in the past than non-Indians, and fewer non-Indians served a prior sentence.

— North American Indians more often served sentences for crimes

against persons; non-Indians more often served time for crimes against property and for drug offences.

— North American Indians also served more short sentences than did non-Indians.

Indian Communities Develop Futuristic Addictions Treatment and Health Approach*

Maggie Hodgson
Director, Nechi Institute
April 12, 1987

A fire is blazing in two Indian Bands in British Columbia.

The fire is the development of a community addictions treatment and healing model. One spark was ignited in the 1970's, when the Chief of the Alkali Lake Indian Reserve decided his community could become sober and healthy by combining the traditional concept of in residence treatment and the total involvement of community in the pre and post treatment process. His philosophy was the community is a treatment centre and a potential place of healing. When he started this courageous task 100% of his community was affected by alcoholism and 10 years later they had achieved 95% sobriety! The second spark was lit approximately 10 years later in another small British Columbia Reserve called Tache. This community developed another model of the vision of the community being a treatment centre and a potential place of healing. They developed an on the reserve mobile treatment program. This new model involved the whole community in the treatment process of the 25 people who attended the treatment program in the Band hall. They came from almost 100% alcoholism to 65% sobriety in three years! The fire has now leaped over provincial boundaries and a small Indian Band in Alberta is now in the process of the development of their own community vision of how they can build on the original philosophy of the community can be a treatment centre and a healing place.

To understand the profound impact of this process of collective thought and action of Alkali Lake Indian Community and the Tache Indian Community we refer to Emile Durkheim's theory on anomie. In talking about suicide in the 1800's Durkheim explained anomie as a collective state of community without values and in a state of hopelessness which contributed to suicide. Webster's Dictionary defines anomie as: a lack of direction or purpose, aimless or rootless. The process of change tends to develop situations in which the old norms no longer restrain individual behavior and new norms are either absent or unacceptable.

Emile Durkheim's understanding of counteracting the state of anomie with the development of a collective state of value or healthy societal norms and the philosophy of the two Indian Communities that the community is a treatment centre both say the same thing. The root of the Indian Communities theory lies in the importance of the collective health of the extended family and community. The only

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difference is Durkheim talked about anomie in the 1800's and Tache and Alkali both put into action a plan to counteract the state of anomie which existed in their communities 100 years later. Neither community had ever heard of Durkheim or his theory before.

The traditional belief that all healing is spiritual.

While sociologists look at the development of societies and the meaning within that society, it is important we recognize within these Indian communities they developed meaning which was not only committed to a practical goal (sobriety) using the extended family system but dedicated to a spiritual goal. That spiritual goal includes the belief all things are related within the universe. That by honouring the spirit of ourselves and others we will become healthy. That when we are hurt through the societal breakdown, through the violence and losses that our spirit becomes hurt.

That we have to work towards the healing of our spirits and the spirit within our community structure through our agents of healing, ourselves, family and friends and Indian leadership. Both communities directed the whole and individual efforts towards the good of the group. Both groups started with a vision of community health. Both groups utilized the major agent of change in the Indian community — the extended family — in the development of their vision. Both Indian communities included the body, mind and spirit in their community health plan. Their vision included the movement to incorporate values of faith in ourselves and our fellowman, trust in the potential for change, trust that they could rely on themselves to help themselves and others, the ability to share the resources, the ability to share love, the ability to share hurt, happiness and sorrow, the ability to show kindness and be kind to oneself, the ability to believe in a power greater than oneself and to believe that the Creator or God is in all of us and our environment. This process involves the force or the power of the creator and the manifestation of love in the community. How did these two communities accomplish this movement from a state of anomie to a state of community sobriety and health? In our Indian Society there is a model of wholeness or what mainstream society refers to as the holistic way of thinking. One form of holistic thinking is in the medicine wheel involving seeing or vision, feeling or emotion, thinking or volition, doing or action. Those parts of the medicine wheel were used in the development of health in these two Native communities. While these two communities did not set up a wheel and say this is what we will follow, they did in fact follow a healing model put forth through visions and direction of Native elders for many centuries.

Alkali Lake History

The Alkali Lake community were historically hunters and trappers as a group. They lived and worked for the collective health and protection of the community. In the early 1900's with the movement of the White population into Canada the children of the Indian Communities were moved into Residential Schools to facilitate the de-

velopment of an educational system and to teach the children the religion of the group operating the residential school. The children were removed from the homes of their parents from the age of 5 to 15 years old. They were denied the right of speaking their own language and removed from their natural family support systems, primarily the extended family. In any culture the primary foundation of the culture is in the language and modeling of parents and community. Removing these children from their natural environment was profoundly damaging. Imagine if we took a 20 block radius in the city and removed all the children from all the homes and placed them in another culture for 10 years with a new language and minimal contact with their family and language? You would have the potential of having a community which suffers from a state of anomie. That is what existed in Alkali Lake Indian Community in the early 1970's. There was a high rate of suicide, murder and vehicle accidents. There was a high rate of child neglect, physical and sexual abuse. There was family violence in every form. There was often a funeral a week. There was almost 100% welfare and unemployment.

Vision — Seeing

In the early 1970's a woman called Phyllis Chelsey came home to find that her daughter wanted to move in with her grandmother because of Phyllis's and her husband's drinking. Phyllis decided she wanted to quit drinking because she could not cope with the thought of her daughter moving out due to her drinking behavior. She could SEE the results of her drinking and she FELT the pain of knowing the results, the potential loss of her daughter and her love and respect. Phyllis went through a grieving process for the loss of her friend, alcohol, the anesthetic for her emotional pain. Her husband experienced severe medical problems from his drinking and witnessed his wife's decision to quit drinking. His motivation to quit drinking was when he was walking to work and saw two little kids walking to school dirty, ragged and hungry and when he asked them if they had anything to eat that morning their reply was no. What he SAW was his vision on why he should quit drinking. He FELT a deep sense of sadness at seeing those two neglected children. His feelings provided the will to quit drinking. He went to a support group for alcoholics and continued to go to the same spot every day to watch the many neglected children walk to school.

Those children were his motivation to continue to stay sober one day at a time for the first year. Imagine being the only two people sober in a community for a whole year, what determination!

He kept his commitment to his vision by witnessing the pain of those children. The first year Phyllis and Andy held a Christmas party for those people who were willing to come sober. The only people to come were a bunch of children who were glad to have a hot meal for Christmas and when the children were eating another woman walked in and announced I quit drinking. They continue this tradition each year of having a community feast for New Year's Day and they have up to 500 people come to that sober feast! Both Andy and

Phyllis brought the lady presents for her and her children. The lady said it was the best Christmas they ever had. Andy started the development of his vision. When people became sober they did everything they could do to support them by demonstrating their encouragement. They showed them love, their sharing and their kindness. They did everything they could to help the people feel good about being sober and provided support to motivate them to stay sober. He witnessed the Chief and Band Council talking about addiction related problems.

He witnessed them talking and drinking at the same time. He decided the way to change the community is to become a leader and provide the leadership in the movement of development of community health through action. After becoming Chief he involved his fellow council members in the commitment to sobriety and community development.

The Chief and Band Council and other community members utilized a process of involvement, commitment, caring and tough love to meet the challenge of working towards a healthy community. When they would find a band employee was stealing from the band because of their addiction, they would give that employee the choice of going for treatment or being charged with theft. When people were abusing alcohol they would place those families on voucher system instead of giving cash for them to drink. When people left their children alone they would go to the home and pick up the children and refused to return the children until the parents went for treatment. They constantly reassured people they cared about them. They had the flow of alcohol slowed down by cutting down the vans bringing in bootlegged booze. They had the bootleggers charged. Charges were laid at the request of Chief and Council. One of the bootleggers was even the Chief's mother. This action was set based on the vision and awareness there was a lot of enabling being done by care givers, child welfare workers and social assistance workers and family members. They stopped following the rules of addicted families. The rules of don't talk about the destruction that is going on in families. When they saw the results of a man beating up his father, they gave him the choice of getting treatment or being charged.

Those methods of intervention were not done in isolation. They dealt with extended family and friends. They ensured they paid attention to the body, mind and spirit of the people when they were intervening on their drinking pattern. They offered support to those people when they would go to treatment. As a community they would send the person a card with everyone signing it saying, we love you, hang in there, you will make it. They would travel 200 to 500 miles to the treatment centre to be there when the person finished treatment to honour that person for successfully completing. They ensured the children were kept in the community in relatives' homes when the parents went to treatment. They would as a community fix up the home of the family who was in treatment while that person was away getting better. They would clean it up and fix the necessities to enhance that person's excitement at returning to a home which was not untidy and neglected.

When those people returned they felt loved and cared for and certainly more comfortable. It left little room for doubt in the minds of the people who came home about whether they were loved or not.

Once there were a few more people sober they expanded their vision as to what the community life required if people were to stay sober. They started the development of a locally controlled store, opened by two women first sober in the community. They set up a logging company. They ensured that when people came back from treatment they had the opportunity to work as volunteers even if there were not jobs available. They ensured there was a sense of purpose which no longer only belonged to chief and council but to the whole community. It is with the ability to continue to have the vision, expand on the vision that the community is a treatment centre. That you do not send someone out to a treatment centre and forget about them for the 30 days they are away from the community and expect the treatment centre to be the miracle workers, but the belief that the person being treated in the centre is in the beginning process of healing and the balance of treatment is carried out in the community and is a community responsibility. That it is not only a responsibility but also an act of love when you extend your hand to that person. These principles are taught to some degree by Alcoholics Anonymous; however, AA does not become a community development, economic development catalyst. Many of the principles of AA were followed and practiced in the process of community support for the newly recovered alcoholic.

Feeling — Emotional Development of the Community

Once there was a larger group of people who had been successfully treated and were back in the community the Chief and community leaders recognized and remembered their own pain from their early days of sobriety. They knew they had expanded on the number of people who knew about addictions, who knew now I'm sober how do I communicate with my spouse, my children? Now I'm sober how do I live with seeing the people I have abused physically or sexually through the years? How do I share my pain with my community peers about feelings I learned how to ignore and not feel? They brought training companies in the Human Services field to the community to teach skills which would assist them in communicating with their children, their spouses, their Elders and employers. They had sobered up but they had to learn more about alcoholism and how it affects them and their communities. They learned how to contradict the DON'T FEEL rule. The rule which destroys many a sober family. They worked on changing the DON'T TALK rule to a TALKING CIRCLE rule. They shared the many losses each experienced and grieved those losses as a community with community support in those healing and training sessions. They utilized the historic norms and revitalized the cultural value of the extended family.

They ensured every man, woman and child participated in training in alcoholism and communications and counselling. Why? Because drug abuse helps to reduce self esteem and people had to recognize

the damage of returning to alcohol and to see how they could assist their neighbors. They followed the old Indian saying, "We are all counsellors." It is important that even the Elders had to take the training programs because many of them had been to boarding school and had lost the sense of value of self and others. Training focused heavily on the development of the people and their emotions. Communication between couples. In mainstream treatment programs they bring together the nuclear family for counselling, maybe a Mom, Dad and two children. The extended family as it exists in the Native Community makes it difficult to use traditional methods to do this and includes all the concerned others. To work with the extended family, Alkali Lake utilized their community as a treatment centre, thereby including everyone who was affected. That training process utilized Native trainers from Alberta, their own community members, non Native trainers and the local community college. They utilized Native, Black, White and Oriental Trainers. The reason I mention the colours of the people involved in the training process is all these four coloured peoples fit on the medicine wheel. They all fit equally on the wheel. Again it was not a planned process but is very symbolic of the healing of feelings of low self esteem with everyone being equal. The heavy training process of the community continued for approximately five years. Within that time Alkali Lake developed their own human relations training institute which assisted their community members and provided assistance to outside communities.

Mental — Thinking

They facilitated the opportunity for Band members to return to school if they choose to as part of their aftercare program plan. In order to assist students to have appropriate accommodation in a larger centre when they were going to school some families pooled their money to purchase a house which they rented to the students. This facilitated the opportunity for students to not live in run down accommodations which is where they had to live prior to the families purchasing the housing for them. It facilitated the opportunity for the students to maintain a support system when they had to leave home to go to school to reach their academic goals. They identified academic resources they would require in their community and encouraged their community members to pursue their careers.

Spirit — Spiritual

They invited Elders from other regions to show them traditional ceremonies and started to partake in daily prayer sweats. Or daily prayer ceremonies. They set up groups for both men and women. They opened all training sets with a prayer and closed with a prayer so their meetings would be spirit driven. They incorporated the spiritual ways into their actions via sharing, caring, honesty and turning their will over to the Creator on a daily basis and with clear thought on the importance of that element of their development as a community and as individuals within that community.

Doing — Movement

People did not receive welfare cheques if they drank — they received vouchers. This was the community's way of saying we will not enable you to continue to drink and it is not OK if you continue to hurt yourself. People had to work for their welfare and in many instances it involved helping others in their community. They had community meetings where they discussed issues which were affecting the community as a whole. Some of these meetings were hot and heavy with anger.

Some of the people were scared of the change, the movement of this community. They held sober community dances where Band members volunteered as their community entertainment. Elders and children learned to dance and have fun together. Moms and Dads learned how to dance sober. Children and families learned to have fun in the old way of the involvement of the whole family.

They looked at the children and identified what they wanted for their children and one of the things they decided was they wanted the children to feel proud of being Indian. They wanted their children to learn to speak their language. They wanted the things for their children they did not have access to, so they set out to do that via the educational system. They had a Band member who worked in the school as a school counsellor to the children. He later became the Assistant Principal and then the School Principal. They started to teach their own language in the school and some of their traditional teachings from the few Elders left in their community. They built a cultural centre in their school. The children participated in the talking circles as a means of rebuilding their trust in themselves and others. They developed a youth leadership corps.

They advised teachers coming into their community that a term of their employment in that community was that they agree not to drink 365 days a year because they were a role model to the students. They had as many Native teachers as possible. They moved to a community controlled school. They were now moving into the realm of community health and taking care of their future through the development of their youth.

Courage — Fear with a Prayer

Dealing with issues which arose as soon as they surfaced in the community was possible because the community trusted change is possible and they had support to change what is happening. With this belief in place, it was much easier than it would be in most communities to deal with the issue of sexual abuse when a member of the community was charged with incest. They immediately brought in a consultant to do an educational workshop on the signs and symptoms of sexual abuse. As soon as this workshop started it became very apparent the community was experiencing another layer of healing, a deeper level of healing. People were trusting enough to say they had been abused and were willing to talk about it. This rippled and the Chief and Council met and decided they were going

to have a community healing session. The new Chief was a woman who had witnessed the development of the community and believed in the community's ability to work on this new community healing problem. Feel the energy!

They hired 5 Native trainers, including the writer, to work with the community in this process. One trainer worked in the school to present information on sexual abuse prevention called, "Strong kids, safe kids." One trainer conducted workshops in the community hall community development. At this workshop there was information given on the signs and symptoms of abuse and how to develop peer support groups. One trainer who is a Pipe Holder and a Sweat Holder held daily sweats to assist in the healing process by providing a focus of prayer and release of the toxins from the people's bodies from the release of anger and deep grieving in the group process. Two other trainers, one a psychologist and the other worked with victims in a separate area and the group's participants became aware the deep feelings of loss and anger about their abuse were the same feelings many, many of their friends, mother or brother had experienced from physical and sexual abuse. Many talked of their deep shame and the guilt from holding in the constipated shame over the years. The important fact was the whole community dealt with the issue of healing and wanting to get healthier.

Seven months later they held another workshop for teenagers who had been abused both physically and sexually during the drinking years. Many of the teenagers were drinking on weekends because of the abuse they suffered. Many using alcohol or drugs were doing it to numb their shame and anger. They continue to work on this issue. Maybe the next generation will be a healthier generation with the community's commitment to health. They do follow with rigorous honesty the TALK rule, the TRUST rule and the FEEL rule.

While I separate out the sweat lodge and people going to church in the community as demonstrations of spirituality in the community healing process, true spirituality is manifested when each person becomes involved in the healing process. The ceremonies mentioned are an opportunity to focus good energy, pray together and facilitate God's healing power. The World Health Organization does not talk too much about spirituality as an integral part of development of a healthy community model. But rest assured it is the foundation. One other form of the spiritual movement within Alkali Lake was the continued expansion of their AA program. After all it is one of the most successful spiritual programs in the world; it has 50 million members in every country in the world. Like Alkali Lake it is a self help organization based on principles of a spiritual nature.

Reaching Out — Sharing

In 1985 the Alkali Lake community developed a film on how they accomplished this miracle of 95% sobriety in 10 years. Remember this is a community which had come from 100% of the population being affected by active alcoholism. The film has been an inspiration

to peoples across Canada and the United States. They continue as a community to work on the future development of working on the next layer of community health. They are now going out to conduct workshops like those conducted in their community 10 years earlier. The community members go to all parts of Canada and the United States in response to requests of please come talk to our leaders and show us how we can do what you have done. They are now in the process of sharing their inspiration of the community as a treatment and healing centre.

Tache Indian Reserve — A Mobile Treatment Model

In 1981 the alcohol counsellor of this small community recognized he was sending people out to treatment centres and when they returned to the community they were unable to remain sober. He decided we have to bring treatment home and the whole community has to be involved.

He discussed the idea with his Chief and Band Council. They supported the development. He started the following process. He brought in the counsellors who would be coming to facilitate the treatment process to conduct workshops on alcoholism to familiarize community members with the counsellors. He worked on building trust and a good relationship. Through this process they would be willing to become involved as a client in the treatment process when it would happen. He brought other trainers into the community to conduct workshops on alcoholism, on the effects of alcoholism on the family and that people were not alone, even if they felt they were. He brought a trainer in to conduct peer counselling workshops to develop support groups in different areas of the community. One other counsellor from the community and the Director, Vincent Joseph, went to the treatment centre in Prince George to participate in the treatment program as an in house counsellor to learn how an in house or residential treatment program operated.

When they were ready for the on the reserve treatment program to commence they utilized an existing facility within the community to conduct the treatment program. The whole community agreed to not drink during the treatment process of the 26 people. This was an act of support and respect for those people partaking in the treatment process. Only two members of the whole community violated that commitment and it was a community with a very high rate of alcoholism.

The community members were involved in the process of the treatment of those 26 people by cooking food for them and babysitting their children. The community health representative assisted and Band Social Workers assisted in the support process. Elders came forward and taught songs and Indian games they had not shared prior to that time. The Priest said Mass in the community to support the community in the development of their VISION. Born again Christians prayed for the success of the community treatment process.

People hunted and fished to help provide food for the feasts during the treatment process. The whole community held an honour feast for the participants of the treatment program when they completed. Paul Hanke, the developer of the model, says a key to the success of this model has been the inclusion of each community's culture.

Aftercare

The counsellors met with the members of the treatment participants on a regular basis. They provided both individual and group counselling. Their aftercare procedure included taking all the treatment members and their families on camp outs. Therapy took place in the process of fishing and hunting, walking through the bush and talking. They continued to enjoy their natural environment and to get well. They had both the benefit of their peer support groups and AA groups for support. The follow up of including the family in the treatment process continued for a period of two years. They found the issue they had not addressed during the treatment process was how the children would feel with the sudden decision of the parents to start to be responsible. By changing a treatment process from the concept of individual treatment of 26 people to including the whole community in the treatment process and aftercare, they changed the concept of treatment.

They incorporated the values of sharing, caring, respect and love in action. The results are after 3 years they have 65% sobriety. Again it is a process of including the spirit, the body and mind. Again it is having a vision, building feeling and trust, thinking about how it can be done and then doing it. During the treatment process they adapted the treatment content to the specific needs of the group participating. An example of that is they dealt with the issue of parenting when it was raised as an issue 50% of the participants were concerned about. They dealt with the issue of couples communications for the couples in the treatment process.

The National Native Alcohol and Drug Abuse program funded the expansion of the program and in 1987 Vincent Joseph and his team went into Anaheim Lake to conduct mobile treatment. At that time 95% of the population suffered from active alcoholism. By involving the whole community in supporting the treatment process that community now has only 5% of the people who still drink. That is 95% sobriety after five months. Is there any other program in Canada which can boast of such success? During the treatment process they hosted sober dances and skidoo races, the first sober skidoo races in that community. They involved the spirit of the people and the leadership in the process of changing community norms. Much attention is paid to utilization of t.v. media in changing norms. Can you possibly think of a more powerful norm changer than leaders and community, seeing that community health is everyone's responsibility?

The World Health Organization would do well to come and observe

the development of a community health model of body, mind and spirit, in practise, not only in theory.

A New Fire of Hope in Alberta 1986

A young Chief saw the Alkali Lake film of how they sobered up and worked toward health by involving the whole community in the development of a sense of value of oneself and others. She also clearly understood it is of primary importance that she be the role model to assist in this development. She went to treatment and believed it was to help her community. When she arrived and participated she found that first she had to help herself. There was a handful of people sober in her community at that time. One year later there are about 30 people sober with about 30 children in Alanon. They have a community team working on the development of mobile on the reserve treatment program. All members of Band Council passed a resolution that if you are going to be a member of this Council, you must be a non drinker. Six months later that has happened. They have developed one English AA group, one Indian language AA group and one women's group. They have a therapist working with team members and people returning from treatment. They have an intervention team which includes social service and other resource people. The residential treatment program is providing training for the counsellors who will be going out to do the treatment program. The training centre is doing workshops to assist in the development of the counsellors and community support group. They will be conducting the on the reserve treatment program in 1987 with community members cooking for the treatment group, they will have feasts, they will be involving the whole community in the two feasts they will have during the treatment process. They will be conducting 30 days of training on the community within one year of the treatment program finishing. They are presently involving 6 young people in treatment for inhalant abuse at the request of the moms and the grandmothers.

They have involved economic development in the community healing process. Society as a whole will learn a lot about collective action in addictions within the next 5 years if they pay attention to these phenomenal happenings. Can you imagine the cost saving of this process. You treat 30 people at a total cost of approximately $30,000. The cost would be around $10,000. to involve the whole community in the treatment process and the results are you have 410 people sober out of 450 people within 5 months. AWESOME as my daughter would say.

The concepts of the community is a treatment centre and healing and developing a sense of health is everyone's responsibility have grown and are working. The models developed in British Columbia of helping the community to reframe and reclaim their vision is happening. All of this can be confirmed in an old Hopi prophecy.

Hopi Prophecy

In the mid 1800's there was an old Hopi prophecy which goes as follows:

Our Indian people are in a darkness and we will come out of our midnight into our day to be world leaders. This change will start when the eagle lands on the moon.

No one understood this business of an eagle landing on the moon. In the 1960's when the first space ship landed on the moon they sent word back to the world, "THE EAGLE HAS LANDED." That week the first Indian Alcohol and Drug Program was set up. The Native Alcohol Programs in North America have been the primary instruments of dealing with addictions prevention and treatment from the holistic way. They have been catalysts in the renewal of the Indian Culture. For good social change to happen it has to have a "spirit" of healing to it, an energy, a vision, and movement. The two case examples presented are manifestations of that prophecy. The Native Alcohol Programs have been the rebirth of our culture. The community involvement in the body, mind and spirit wellness and the miraculous results in short periods of time is the futuristic model all sectors of society could learn from. SEE THE SPARK.

The development within these two communities changed the collective state of anomie with the development of a collective vision of the value of community health. The prophecy is coming true.

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Inpatient Treatment of the Psychiatric Patient with Alcoholism*

Margaret Bean-Bayog, M.D.

Department of Psychiatry, Cambridge Hospital, Cambridge, Massachusetts

Abstract: Patients with both alcoholism and mental illness, or the one masquerading as the other, are very common and often puzzling and discouraging to clinicians. This article reviews several aspects of these problems: epidemiologic studies show that substantial proportions of mentally ill people suffer from alcoholism, and these disorders interlock in complex ways, each exacerbating the other. Many physicians feel uncomfortable working with alcoholic people, mostly because of poor training, and this impinges on difficulties of giving excellent care to these taxing patients. Complexities and resistances to interviewing obstruct evaluation. Interviewing and history taking techniques and the reasons for them are discussed. The decision whether a patient needs medical or psychiatric hospitalization, alcoholism rehabilitation, or outpatient psychiatric or alcoholism treatment is reviewed along with the management and sequencing of treatment for primary and secondary alcoholism with concomitant psychosis, mania, depression, panic disorder, and adult attention deficit disorder. Clinical intervention and referral for the patient on a medical or surgical floor who may have alcoholism is discussed. Two special clinical problems, the differential diagnosis of postdetoxification depression and the risks of using alcohol cross-tolerant drugs, are also reviewed.

Introduction: overlap between alcoholism and mental illness

Many psychiatric symptoms can be produced by alcoholism in the absence of mental illness, and many mentally ill people also abuse or become addicted to alcohol. Eight percent of men and 3%-5% of women meet the criteria for alcoholism,[1] and mental illness is found in a higher proportion of this group than in the general population.

Epidemiologic studies show that 10%-15% of hospitalized schizophrenics have serious drinking problems.[2] Twenty percent of alcoholics entering rehabilitation have schizophrenia or affective disorder, and 80% of sociopaths have a history of serious alcohol abuse.[3] Though only 5% of male and 15% of female alcoholics have major affective disorder[4-6] studies show that during drinking 50%-98% demonstrate clinical depression by some scale.[7,8] Alcoholism fre-

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quently produces symptoms that mimic the clinical picture of almost every type of mental illness. It often produces psychiatric emergencies such as assaultiveness, psychosis, disorganization, and suicide risk. It also produces other psychiatric symptoms, so that patients on medical and surgical floors who require psychiatric consultation may actually have primary alcoholism masquerading as psychiatric disorder, which the consultation-liaison psychiatrist needs to know how to diagnose and manage.

When alcoholism occurs in a patient who is also mentally ill it worsens the clinical picture of mental illness. Whichever disorder is primary, each exacerbates the other. A schizophrenic person may attempt to ward off psychotic anxiety with alcohol or sedative drugs, become addicted, and then in withdrawal experience hallucinations, disordered thoughts and affects and disorganization as a result of either the psychotic process or the addictive one, or the one uncovering the other. Patients treated with disulfiram for alcoholism may become psychotic as a side effect of the drug in the absence of underlying psychosis, or the drug may uncover psychotic phenomena in a poorly compensated borderline or schizophrenic patient. For this reason disulfiram should be discontinued on admission and is usually contraindicated in schizophrenia.

Drinking episodes may abort compliance with antipsychotic medication. There is a serious risk of lithium toxicity (or dilution) in a patient who drinks and either forgets that he has already taken his dose or who experiences fluid shifts and dehydration from diuresis or vomiting secondary to drinking. It may be necessary to discontinue the drug in a patient for whom it would otherwise be indicated, until at least several months of sobriety or abstinence can be established.

Phenothiazines lower seizure threshold and may precipitate withdrawal seizures in the alcoholic or sedative-dependent person.

Patients may use the diagnosis of mental illness to support their denial of the diagnosis of alcoholism and their need for treatment. Well-intentioned mental health personnel may collude with this denial when they treat the drinking as if it were a dynamically determined symptom.

Problems in training

These clinical complexities are made more difficult by the lag in medical training. Psychiatrists are increasingly being expected to care for patients with alcoholism, and in the last decade the mechanisms of illness and recovery have been described. But a recent AMA study reported that 71% of all physicians feel uncomfortable working with alcoholic patients, and psychiatrists are no exception.[9]

"During training, students and interns are not given supervised practice in managing the problems typically encountered in the alcoholism interview. Furthermore, we seldom explore patients' inner experience in any depth and therefore know them only superficially

and in stereotypical terms. All alcoholic patients, even if externally calm or unmotivated for change, are affected by anxiety, depression, guilt, anger, and are obsessed by thoughts of drinking (or not drinking). They feel deeply stigmatized and judged at every turn."[10]

Few of us during medical school and residency spent even a single week in an addiction treatment facility. Many have never been to a Narcotics or Alcoholics Anonymous meeting. And few of us had teachers who could show us how recovery looked when treatment was done well.

Staff with skills in both alcoholism treatment and mental health are scarce, though the situation is improving. Alcoholism counselors, comfortable and confident managing the alcoholism are often insecure and out of their depth when their alcoholic patients are also psychiatrically ill. Psychiatrists may experience the converse. There is also a language barrier that prevents smooth referral and consultation even if the patients were not so difficult. Much drug and alcohol treatment is carried out by paraprofessionals, often recovering, counselors, or nonprofessional (A.A. or N.A. members) who do not believe in the scientific method and whose style may be authoritarian, dogmatic, rigid, inspirational, and antagonistic to self-examination. Most inpatient alcohol rehabilitation programs exclude alcoholics with mental illness. Further, because so many alcoholics have been mismanaged by psychiatrists, they tend to regard them with suspicion and hostility.

Psychiatric professionals may react defensively to this, losing positive contact with the staff who possess the skills needed to work with alcoholic people. Translators are desperately needed, because each group needs the expertise of the other if patients are to be well served.

Evaluation

How then does one interview these challenging patients? The criteria for diagnosis are simple enough.

The DSM-III criteria for *drug abuse* are

1. A pattern of pathologic use, such as chronic intoxication or inability to cut down or stop use.
2. Impairment in social or occupational functional caused by the pattern of pathologic use such as legal problems or loss of job.
3. The disturbance lasts for at least a month.[11]

The DSM-III criterion for *drug dependence* is that the person has physiologic dependence as evidenced by tolerance and withdrawal.

Tolerance is the phenomenon whereby increased amounts of the drug is required to achieve the same effect.

Withdrawal is a drug-specific syndrome that develops when intake of the addicting substance is stopped or cut down.

Yet without understanding the psychologic distortions that grip the alcoholic and that must be pried apart to extract the information to

establish the criteria for diagnosis, the difficulty of interviewing will be underestimated, and obstacles to it may be taken personally.

Psychologic features of alcoholism that block interviewing

Alcoholism develops slowly over a period of years and produces psychologic disruption. There is a preoccupation with drinking and efforts to control alcohol use, which fail at least some of the time, and guilt and shame about behavior related to drinking.

Externally, the patient experiences painful feedback from psychologic, familial, social, medical, economic, and legal complications. Internally, the patient experiences a loss of control and an inability to cope with the addiction, which increasingly controls him; this produces depression, guilt, shame, impaired self-esteem, anxiety, and anger. Early efforts to defend against these feelings with high-level mechanisms like anticipation, sublimation, and humor collapse in the face of overwhelming and intensifying painful contact with reality. The patient is driven back to primitive mechanisms like omnipotence, magical thinking, grandiosity, and, above all, denial.

These complex defenses produce the alcoholic's bland, cheerful presentation, in which questions about alcohol abuse are casually minimized and the subject avoided.

The interviewer must remember both the suffering, which the patient cannot bear to acknowledge, and the urgent protective function of his bizarre defenses. Alcoholics are no more likely spontaneously to relinquish their psychotic-level denial than schizophrenics to stop hearing voices, and interviewing technique must be sophisticated enough to take this into account.

This is the reasoning behind the following interview strategies:

Focus the interview on the patient's subjective experience, not on his bad behavior.

Do *not* ask how much the person drinks. The alcoholic person gets constant criticism that "you drink too much," so the question accuses and humiliates, intensifying denial, forcing minimization, obtaining little information, and damaging interview rapport.

One can start with the excellent screening device, the CAGE test:[10]
Have you ever felt the need to *Cut down* on drinking?
Have you ever felt *Annoyed* by criticisms of your drinking? (Incidentally, an angry response to "how much do you drink" is a positive response to this question.)
Have you ever felt *Guilty* about drinking?
Have you ever taken a morning *Eye-Opener*?

Questions framed in the passive voice that ask about *suffering* that results from drinking, such as "Has drinking ever harmed your self esteem? Your relationships? Your health? Gotten you in legal or financial trouble?" are also useful. If there are positive responses to these

open-ended questions, more detail can be obtained by pursuing two more mnemonics: *HALT* stands for questions about drinking to get High, Alone, Looking forward to it, and developing Tolerance; and *BUMP* stands for questions about Blackouts, Unplanned drinking, "Medicinal" drinking (to suppress feelings), and Protecting one's supply.

The patient is usually the last to realize the diagnosis. It is helpful if the psychiatrist makes the connection between drinking and suffering. The patient usually sees alcohol as a way of alleviating pain, not as a way of producing it.

The patient also needs to hear that drinking is not *safe* for him. He usually reacts to a suggestion of abstinence as if he were being judged and deprived or punished, not protected and cared for.

The alcoholism should be destigmatized. The patient will not be willing to admit to the diagnosis if it means he is degraded. Discussions of its genetic origin and celebrities with addiction may be useful.

Even with these strategies, because of both the doctor's and the patient's intense feelings about alcohol, the physician's lack of supervised experience and sympathetic understanding and the patient's evasive or hostile response, it is difficult for the clinician to maintain a position of respectful tolerant helpfulness, let alone work out a systematic treatment plan with the patient even if he does not have concurrent mental illness.[10]

Specific competent help should be offered. Even the physician who does not wish to manage the addiction himself can alleviate the patient's despair about recovery and refer the patient to a more appropriate treatment facility.

Deciding how to treat

The decision whether a patient needs medical or psychiatric hospitalization, detoxification, alcoholism rehabilitation, or outpatient psychiatric or alcoholism treatment depends partly on clinical factors and partly on what resources are available. Units competent to manage all these simultaneously are scarce. Often, the best arrangement is to treat in sequence, addressing first whichever is more severe or life-threatening or whichever blocks treatment of the others.

Medical emergencies generally supersede other needs and require medical hospitalization. Next in urgency are psychiatric emergencies. Dual-diagnosis patients should be admitted to a psychiatric unit (rather than alcoholism treatment) if they have psychiatric symptoms severe enough to require psychiatric hospitalization. Overt psychosis, serious suicide and homicide risk, and confusional states exceed the management capacity of alcohol treatment units.

Inpatient management: the medical or surgical inpatient

When an alcoholic patient is admitted to a medical or surgical ward it is usually for treatment of medical complications of alcoholism or an unrelated problem, and the concurrent or underlying alcoholism is often not diagnosed, or, if acknowledged, not addressed and aggressively treated, thus losing a great opportunity with a captive patient to engage them in a discussion about their drinking and its risks to their health.

When alcoholic patients are seen on medical or surgical floors in consultation-liaison work they are rarely labeled as such. They often present with psychiatric symptoms which are a complication of the alcoholism. If the consultation-liaison physician takes a careful alcohol history as described above and makes the diagnosis he will be in an excellent position to educate both the primary care physician and the patient about the contribution of alcoholism to difficulties in medical management. Patients are often in the hospital long enough for detoxification (supervised or cold turkey) to be complete and the cortical impairments (described below) to begin to remit, allowing them to think clearly enough to understand what you want them to learn about their disease and how to get sober.

In addition, they may be hospitalized for treatment of a complication of their primary alcoholism, such as pancreatitis or a withdrawal seizure, which can be used as leverage to confront their denial.

One of the most valuable recommendations may be to suggest consultation and evaluation from the alcoholism counselor or addiction treatment specialist while the patient is in the hospital. Patients may not like it and primary physicians often join their avoidance and denial, but it is a very useful and powerful intervention. If the alcoholism is severe, it will be appropriate to arrange admission directly from the hospital to an inpatient alcoholism rehabilitation program; if it is less severe, alcoholism counseling can begin while the patient is still medically hospitalized, thus smoothly facilitating entry into alcoholism treatment and preventing the patient from being discharged with undiagnosed and untreated alcoholism and lost to follow-up.

Inpatient management: the psychiatric patient

When a patient with symptoms of mental illness or alcoholism or both is admitted to a psychiatric inpatient unit, he must be evaluated for both types of diagnosis and an effort should be made to establish a temporal sequence, because clinical management of primary alcoholism is different from addiction secondary to mental illness. Management of psychiatric symptoms that are a complication of alcoholism is essentially symptomatic treatment plus the treatment of the primary disorder.

In fact, sometimes it is impossible to establish primary diagnosis and under those circumstances management is empirical. After ad-

mission work-up, detoxification if needed, and treatment for medical or psychiatric emergencies, there are five psychiatric diagnoses that it is important to establish immediately in addition to the alcohol abuse: psychosis, mania, depression, panic disorder, and adult attention deficit disorder.

Essentially the goal is to observe the patient off all drugs for 2-4 weeks in hospital to see if the symptoms resolve spontaneously, indicating that they are *withdrawal* phenomena, in which case treatment is that of the primary alcoholism of which they are a complication.

If the symptoms persist, indicating that there is either primary or concomitant psychiatric illness, this should then be treated.

For example, when a patient is severely depressed, one watches the symptoms, which in 2-4 weeks will follow one of two courses. If the depressive symptoms decline, then the depression was reactive, or a complication of the alcoholism.[4-6]

Special clinical problem: the differential diagnosis of postdetoxification depression

The mood of the alcoholic person who has stopped drinking is a result of the balance of a large number of factors impairing or improving it.

Two factors improve mood in the newly abstinent patient. First, the patient is less physically sick and toxic, and the limbic system, no longer damaged by the presence of alcohol, can begin to heal and return to its function of regulating emotion. Second, the patient usually feels relieved to have entered treatment and relinquished some of his denial. Actively addressing the problem opposes despair, demoralization, and the sense of being overwhelmed. The person feels that he is now being "good" and guilt may give way to self-congratulation. If these features dominate the clinical picture, the newly abstinent person's mood will be good, sometimes referred to in Alcoholics Anonymous as "being on a pink cloud."

Unfortunately, all the other factors in early abstinence cause reactive depression, which is far more common. Though toxic phenomena abate, organic impairment is often long lived. It may persist for months to years after the last exposure to alcohol. In addition to the acute delirium of intoxification and the often-described hard neurologic syndromes of late alcoholic dementia, Wernicke-Korsakoff psychosis, and cerebellar degeneration, what is very much more commonly seen, and thus clinically much more important, are finds of partially reversible impairments in neurologic function in almost every area examined. Cortical impairments include prominent frontal lobe disruptions with concreteness and failure of abstraction, judgment, and future planning; impaired perceptual functioning with abnormal auditory and visual evoked potentials, photophobia, and hyperacusis; sleep disorder with absent stage III and IV sleep and rebound REM sleep with nightmarish dreaming; and limbic system dysfunction with raw, primitive, labile affects described in Alcoholics Anonymous as "the fears," "the remorse," "the resentments," and "the poor me's."

What is clinically important is that these disturbances 1) are very common in early recovery and ongoing alcoholism, 2) often remit spontaneously when the patient is kept safe from further toxic exposure to alcohol, and 3) when present make patients look more primitive and psychopathologically disturbed than they turn out to be when they get sober.

It is very helpful to explain to the patient that part of his current misery is a toxic phenomenon that will abate with time spent alcohol free and may not require psychotherapy, and that drinking will worsen it.

In addition to the organic impairments, craving for alcohol to abort protracted withdrawal may be intense for months; this also tends to heal with time alcohol free.

Additionally, the newly sober patient is immediately faced with several kinds of grief. In order to assume the stigma of being diagnosed as an addict, he must grieve the loss of his "civilian" status, and full rights to drink. The omnipotent control was only a fantasy, but it protects against the degrading acknowledgment of loss of control. Besides, prejudice against alcoholism is real. Facing it takes energy. It is painful in itself and simultaneously the patient's enormous inner shame and guilt must be worked through.

Another grief is the loss of alcohol, for some people as massive as a loss of a close family member. While ambivalently loved, drinking gave immediate comfort.

The patient is also faced with looking back at the disorder he has created in his life, grieving lost opportunities and destroyed relationships, health, financial, and legal status.

Because the denial has been breached and the anesthetic protection of drinking is gone, other old griefs (for example, a mother's death 5 years earlier) may suddenly present with the force and vividness of recent loss because they were never worked through.

In addition to all this, the patient is faced with the work of inner remodeling and behavior change required in order to recover.

On balance, more patients suffer reactive depression than reactive elation when they enter treatment, even if they have no primary affective disorder or other mental illness. Clinically this pattern is more frequently seen than alcoholism with true affective disorder. Antidepressants are not usually indicated and the treatment is that of the alcohol problem.

True double-diagnosis patients

If on the other hand, after 2-4 weeks the depression remains the same or worsens, the source is likely to be an endogenous depression, which will probably respond to an antidepressant or electroconvulsive therapy (ECT). Antidepressants can then be prescribed as for the simple case of affective disorder with three modifications:

1. The suicide rate for alcoholics is high and affectively disordered alcoholics are at very high risk. Prescribe accordingly.
2. Alcoholic or addicted patients sometimes abuse and develop secondary dependence on antidepressant drugs, especially those with anticholinergic side effects. It is better to use an antidepressant that minimizes these, such as desipramine or trazadone.
3. Be aware that the addicted patient using Alcoholics Anonymous may be warned in A.A. to discontinue *all* drugs as dangerous, and will therefore need clarification and support.

Psychosis, mania, and panic disorder

Like depression, the clinical picture of psychosis, a manic-like picture, and panic disorder may all be observed during detoxification period. If they are secondary to alcoholism or drug abuse, they remit spontaneously in days to weeks and do not require separate treatment. If they do not, they should be diagnosed separately and treated. For example, alcoholics often have symptoms closely mimicking panic attacks that cease with time off drugs. If they do not diminish, they should be treated with a drug such as phenelzine sulfate or imipramine to block them.

Adult attention deficit disorder is less likely to be confused with detoxification phenomena but can resemble withdrawal agitation, toxic confusion, or the organic impairment seen in chronic alcoholism. When it is diagnosed, it responds to methyphenidate, allowing the patient to become calm enough to participate in treatment for the alcoholism. Untreated, it is a major obstacle to recovery.

Special clinical problem: the risks of using alcohol cross-tolerant drugs

Psychiatrists who would normally prescribe benzodiazepines for the types of discomfort and anxiety states that alcoholics often complain about need to know about several risks:

1. The symptoms are often *withdrawal* phenomena, not a separate psychiatric disorder, and respond to support and explanation. They usually do not need pharmacologic treatment.
2. All alcohol cross-tolerant drugs pose a serious hazard of iatrogenic addiction in chemically dependent people. If it is impossible to avoid using them they must be carefully monitored.
3. Most serious, a single dose of benzodiazepine, barbiturate, other sedative, or general anesthesia acts like a single cigarette in a heavy smoker who had stopped smoking: it vastly increases the probability of relapse. After detoxification these drugs are dangerous in this population and should be avoided.

Follow-up and referral

After the acute psychiatric symptoms are controlled the patient should be directly referred or transferred to an alcoholism treatment

program. Containment of the alcoholism should usually take precedence over outpatient psychiatric management because drinking will abort both pharmacologic and psychotherapeutic follow-up work, and since psychiatric patients often do very well in alcoholism treatment.

In actual clinical practice both may be needed simultaneously, because the psychiatric symptoms interfere with patients' use of drug or alcoholism treatment, because alcoholism treatment staff may need support and consultation to deal with the psychiatric symptom level, or because overcoming the patients' resistance to drug or alcoholism treatment may require psychiatric skills.

Unless the psychiatrist becomes expert in alcoholism treatment, what he will need are skills in diagnosis and management of referral, and an understanding of when each type of treatment applies. Any hospitalization, whether for treatment of medical complications, alcoholism, or psychiatric disorder must be seen in the larger context of the course and prognosis of both diseases. Moreover, though work with these doubly suffering patients is complex and can be daunting, psychiatric patients with alcoholism often use alcoholism treatment successfully, and alcoholic people with psychiatric symptoms benefit greatly from appropriate psychiatric help.

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Direct reprint requests to:
Margaret Bean-Bayog, M.D.
Department of Psychiatry
Cambridge Hospital
1493 Cambridge Street
Cambridge, MA 02139

Doctors and Drugs*

Carmen Johnson and Verna Scott
Medicine III

Introduction

An impaired physician can be defined as one who is unable to practice medicine with reasonable skill and safety to patients because of physical or mental illness. This paper deals with impairment of physicians through alcohol and drug addiction.

It is important to note that substance abuse and substance addiction are not the same. Abuse is defined as the use of a psychoactive chemical to the extent that it interferes with a person's health, economic or social function. Addiction is a chronic, progressive incurable disease characterized by loss of control over the addictive substance. Addiction usually denotes increased tolerance and withdrawal reaction when substance use ceases. The abuser may use more of the substance, use it more often and still not develop the disease of addiction.

Impairment of physicians can develop at any stage of life but severe dysfunction is most prevalent in the mid-life years.

Prevalence

Physicians are no different than any other professional group — among them are drug addicts, alcoholics, the mentally ill and otherwise compromised practitioners. The problem is more serious in the medical profession, nowever, since a doctor's mistakes can seriously disable or kill a patient. As the problems of malpractice litigation and public accountability have grown, concerned physicians, medical societies, the government, and physician-licensing agencies are making a greater effort to identify and rehabilitate alcohol and drug addicted physicians.

Physicians have the same risk of alcoholism as non-physicians. Of the 70 percent of Americans who drink, an estimated six to ten percent develop alcoholism. If the same figures apply to physicians, approximately 20,000 will become alcoholics. Alcoholism frequently precedes or underlies addiction to other drugs.

No one really knows how many practicing physicians are having problems with drug addiction. Most chemical dependency among physicians is unrecognized, undiagnosed and unreported, so it is not possible to accurately measure its incidence or prevalence. It is commonly reported that there are 30 to 100 times as many physicians addicted to narcotics as there are addicts in the general population. The prevalence of drug/alcohol impaired or recovering physicians in Saskatchewan is from 10 to 15 percent.

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Studies have reported that physicians who commit suicide are often chemically dependent: suicide is twice as common among physicians as non-physicians and is the leading cause of death among physicians.

Etiology

What causes alcohol and drug addiction? The etiology of impairment of physicians is unclear, but some predisposing factors/risks have been offered in the medical literature. Studies suggest that significant factors include: 1) occupational hazards of the profession, 2) a genetic predisposition, 3) a predisposing personality, 4) family background, 5) pain and illness, 6) characteristics of significant social relationships, 7) lack of education and training in addiction and stress management, and 8) the requirements of medical training.

Occupational hazard

Impairment is considered to be an occupational hazard of medicine. The high expectations, high level of achievement and motivation of many physicians leave little time for personal health and emotional well-being. Stress is an intrinsic part of medical practice. Physicians' training often does not prepare them to deal with the highly emotional aspects of medical practice such as suffering, fear, sexuality and death. Most physicians work continuously in fear of death since death is usually seen as failure by both the physician and the patient's family.

Additional burdens of medical practice include the increasing financial cost of running an office, fiscal pressure exerted by government and health insurance companies, interpersonal problems with nurses and consultants, excessive paperwork, interference through external regulation, the fear of malpractice suits, and peer reviews.

Physicians unquestionably deal with many stressors, but as physicians they also carry around a set of myths about themselves that make coping more difficult. These myths are reinforced and supported by the medical community and general public, and are perpetuated throughout medical training.

Myth One: the physician is all knowing. Given the scope of medical knowledge and the fallibility of the human memory, not all facts can be memorized.

Myth Two: uncertainty is a sign of weakness. The ideal physician always functions with certainty and has a ready answer to any situation. Any uncertainty would be seen as a sign of weakness. In reality, physicians must acknowledge limitations in their knowledge and be willing to take advantage of available assistance.

Myth Three: patients should always come first. Physicians are constantly expected to give of themselves to meet their patients' needs. Many physicians have health habits they would never prescribe for their patients. The fact that all of us have physical and social limits may only be recognized when it is too late, when health problems and impairment have already developed.

Myth Four: technical excellence will provide satisfaction. If cure is used as the only criterion for success, physicians will experience a series of failures since all patients will ultimately die.

Myth Five: patients, not physicians, need support. Physicians have difficulty admitting that they need help. Physicians will voice complaints about external problems but rarely acknowledge the unique personal hurt they feel.

The availability of drugs and the ease with which physicians can obtain drugs for personal use contributes to the prevalence of physician drug addiction. A physician can self-prescribe drugs without having to fulfill any legal or professional justification for his need for medication. The availability of samples in the physician's office enhances the temptation to seek relief from various ailments.

Genetic predisposition

High familial rates of alcoholism and some types of drug dependence have raised the possibility of a genetic predisposition to the development of chemical dependence. Hereditary studies done all over the world indicate that genetics is the most significant factor in determining whether someone will be an alcoholic.

When there is a family predisposition toward a disease, medical science looks for an abnormality in the body biochemistry to provide clues for diagnosis and treatment.

Chronic alcoholics have been found to have a substance called tetrahydroisoquinoline (THIQ) in their brain tissues. In normal social drinkers, alcohol is converted to acetaldehyde that is converted to acetic acid and then finally to carbon dioxide and water, which are eliminated through the kidneys and lungs. In the alcoholic, a small portion of the acetaldehyde is not converted but goes to the brain where it becomes THIQ. THIQ has been found to be highly addictive, creating a craving for alcohol, and remains in the brain for years.

Predisposing personality

In extreme cases the obsessive-compulsive personality that can be a professional asset can also become a significant contributor to physician impairment. Characteristics identified in physicians that aid impairment are basic insecurity, dependency, depressive tendencies and vulnerability to stress.

Studies indicate that the psychosocial characteristics of students that lead them to medicine also predispose them to emotional problems and substance abuse. Psychosocial characteristics common to medical students include: compulsiveness, conscientiousness, lack of control over emotions, delay of gratification, formation of unrealistic fantasies about the future, and passive-aggressive and obsessive-compulsive defence mechanisms.

Physicians often tend to rely on the defense mechanisms of repression, rationalization, and denial to suppress and displace emotions. Although these mechanisms are not necessarily maladaptive, denial is often used as a defence mechanism by physicians on drugs. The

majority of impaired physicians deny serious addictive difficulties and are under the illusion that they could stop using drugs at any time. Two defenses, postponement and denial, contribute substantially to the high prevalence of impairment in mid-life. The gradual process starts with disillusionment, then maladaptive coping, and eventually impairment ensues in mid-life.

Pain and illness

Physician addicts differ from street addicts in that they begin drug use for therapeutic reasons rather than for recreational use. The principal reason physicians begin self-medication is to alleviate chronic pain, fatigue, illness and alcoholism. Physicians justify their drug use by stating that the drugs help them to continue performing their professional responsibilities. Some physicians are convinced that without their drugs they could not practice. They feel their responsibility to patients overrides any personal considerations resulting from the required drug use. Some impaired physicians will also use drugs in an attempt to deal with insomnia, nervousness, and depression caused by excessive drinking. The alcoholic physician frequently confuses the cause and effect and believes that his problems with depression and insomnia caused him to drink, rather than the reverse.

There is also a small group of physician addicts who are multiple drug users. These physicians (who are frequently intoxicated, have frequent accidents, personality disorders, physical pain and suicide) use drugs for euphoric inducement.

Social relationships

Work related pressures — long work schedules, erratic unpredictable time spent at home influence the physician's home and family life. Problems experienced by physicians as a result of these pressures include: decreased interest in the family, increased irritability, conflict with their spouse and children and dissatisfaction with sexual activity. The physician's inability to turn off his professional role and adjust to the affectionate role of husband/wife and parent is a major complaint of spouses and children. If a physician is unaware of his role in family problems, he often attributes the cause to someone else in the family, which creates more misunderstanding and resentment.

Lack of education

Physicians are not knowledgeable about the potential risks associated with their own use of alcohol and drugs. Most medical students and physicians have little idea of the hazards of self-medication or their own potential for addiction and impairment. Another concern is the lack of education and training in non-drug alternatives to stress management and coping. Instead, the ready availability of drugs and the prevailing attitude of drug use as a way of working, feeling, and sleeping better creates an atmosphere for addiction.

Medical training

Medical school is considered a stressful experience with the poten-

tial for medical student impairment and for later physician impairment. Impaired physicians who have been asked when their problems first began almost always say that medical school provided the right mixture of stress, lack of social interaction and lack of support to allow for the development of dysfunctional coping mechanisms that eventually led to impairment.

The need to learn massive amounts of material and the resulting lack of time to meet personal needs, student-faculty relationships, concern about patients, and feelings of being dehumanized contribute to the recognized stress experienced by medical students. Internship and residency present their own unique stresses — an extraordinary time demand with physical and emotional exhaustion, intense and sudden responsibility for life-death decisions, a feeling of loss of control over one's life and the large amount of information to be mastered. The climate of a residency program is often opposed to expressions of personal or professional distress. Many interns and residents feel a need to be exceptionally competent and in control. They often measure their performance against an idealized concept of what their peers are doing.

Verbal abuse, humiliation and the undermining of a student's self-esteem by physician educators is harmful to students and destructive to the educational process. These factors in the medical education system affect not only the student's feelings and behavior in the short term but they may substantially influence his future life and medical career. It is interesting to note that most impaired physicians graduated in the upper third of their class.

Signs and symptoms

It is often difficult to identify the impaired physicians. They will attempt to deceive themselves and others as long as possible. They are unfortunately encouraged in this behavior by both patients and colleagues. Patients deny recognizing the physician's humanness and generally will not report disabling behavior. Colleagues tend to be overgenerous in the investigation of an impaired physician. Physicians have difficulty seeing themselves as patients, as well as fearing loss of job and income. The catalogue of evasions and rationalizations can go on but all serve to avoid help and perpetuate the physician's stress and illness.

To identify the impaired physician it is important to understand the nature of impairment and to recognize the signs and symptoms of alcohol and drug addiction. There are seven such signs and symptoms.

1. The compulsive use of the drug despite its lethal consequences.
2. Destruction of the addict's physical health.
3. Destruction of emotional health. Excessive mood swings, uncontrolled anger, depression and other painful emotions increase with the progression of addiction.
4. Destruction of their social, spiritual and cultural lives.
5. Abnormal change in tolerance to the addictive substance.

6. Presence of withdrawal.
7. Blackouts or true drug amnesia that occurs with addiction to sedative hypnotic drugs and narcotics.

Unfortunately, by the time these diagnostic criteria are evident, the illness is usually quite advanced.

Treatment

Goals of treatment

The goals of treatment are to develop a chemically free lifestyle and to fill the void created by the removal of chemicals with a program of personal and family recovery, interpersonal support and fellowship. Specific objectives of treatment would include: 1) recognize their addiction problem, the potential for relapse, and the need for continued treatment, 2) reduce sources of stress and change their lifestyle to minimize the chances of relapse, 3) develop ways of coping with stress without resorting to drug use, 4) return to work and family with a continued commitment to maintaining abstinence. Ultimate criteria for recovery would be abstinence and return to effective job functioning. Brief relapses are not usually considered treatment failure if the patient is able to retain abstinence without disruption in functioning.

Prognosis

Physicians are found to have a higher success rate than the general population. In Saskatchewan the rate runs at 65 percent and higher. Aside from motivation, the success rate also depends upon three other factors: 1) substance or substances used, 2) whether or not the physician is working, 3) age. Patients addicted to Demerol have the highest rate of success. Physicians with long addiction periods, multiple previous admissions and severe professional difficulties recover as favorably as those with lesser problems.

The SPARC Committee

In Saskatchewan the College of Physicians and Surgeons and its sub-committee, Saskatchewan Physicians at Risk Committee (SPARC), handle complaints regarding physicians practicing in Saskatchewan. The SPARC committee consists of six physicians, including Dr. Kendel, Registrar, College of Physicians and Surgeons, and Dr. Ernie Baergen, President of the Saskatchewan Medical Association. The mandate of SPARC is to help identify the impaired physician, to intervene and to help place the physician in treatment, and to support the recovering physician with follow-up treatment. The committee meets quarterly.

Referral to SPARC

Physicians rarely refer themselves for treatment. It becomes the responsibility of fellow physicians, hospital staff, and patients to report the impaired physician. The report can be anonymous, a telephone call or a letter. Three agencies receive the complaints: 1) College of Physicians and Surgeons, 2) SPARC and 3) S.M.A. All reports are investigated.

If a positive verification or adequate level of suspicion is found, two SPARC members confront the physician with the problem. If the physician agrees to treatment, SPARC will assist the physician's placement in a program. If the physician refuses treatment the committee is forced to notify the College, who then meet with the physician and spouse. At this meeting it is made clear to the physician that if he does not comply with treatment, the College will lay a charge against him. Once a charge is laid, the College can revoke the physician's license to practice.

The license of a Saskatchewan physician undergoing treatment is rarely revoked unless criminal activity surfaced during the investigation. Most physicians leave the province for treatment, usually to The Heartview Foundation in Mandan, North Dakota.

Obstacles to treatment

Getting a physician into treatment can be very difficult. There seem to be four major obstacles. 1) It is very hard for the physician to accept that he/she needs help, 2) the physician often has difficulty knowing who to trust and who to turn to for help, 3) physicians find it difficult to be placed in a patient role, and 4) there is a problem of financial loss while in treatment.

Follow-up and return to work

In Saskatchewan, the follow-up is mainly the responsibility of SPARC. Follow-up consists of regular meetings for at least a year. The recovering physician must also attend monthly progress meetings with the College of Physicians and Surgeons. There are several stringent guidelines when the physician returns to work.

Prevention

Even though the etiology of drug and alcohol addiction among physicians is uncertain and the signs and symptoms are vague, possible methods of prevention should be sought in an attempt to reduce the economic and human cost of physician impairment.

The most important time for prevention is during medical training, since, as many studies suggest, the potential for stress and maladaptive behavior leading to impairment is present during this time. There has been very little research and study done in the area of prevention of physician impairment. The efficacy of any medical training programs that have been developed in an attempt to prevent impairment is yet unproven. However, this should not stop medical schools from developing and using new and innovative measures with the aim of primary prevention.

Recommendations

1. Stress management should be part of formal medical training.
2. Medical training should help students learn to balance their emerging professional identity and work satisfaction with their personal identity, emotional needs and self-satisfaction.

3. The educational process should be refined to:
   — change memorizing facts to an emphasis on thinking and understanding.
   — use honours/pass/fail grading system instead of percentages or if percentages are used avoiding ranking and posting marks.
   — give students an opportunity to study about and understand their own emotional response to emotionally disturbing issues.
   — decrease the professional in-hospital time demands made upon physicians-in-training.
4. The study of addiction as a primary disease should be given appropriate time in the curriculum. Special emphasis should be placed on the physician's own vulnerability to addiction and on the hazards of self-medication.

Medical schools have a responsibility to graduate not only well trained, competent physicians but ones who are also well-adjusted, emotionally stable and healthy.

This article is condensed from a project requirement for "Man, Medicine, and Society" class (Year II).

Registrar's Perspective on Physician Impairment in Saskatchewan*

D.A. Kendel, M.D.

Registrar
College of Physicians and Surgeons
of Saskatchewan

Carmen Johnson and Verna Scott have produced an extremely well researched review of physician impairment due to drug and alcohol dependency. If any aspect of this report warrants emphasis it is that chemical dependency is a disease that, if detected and treated, can be controlled with a reasonable degree of success. Untreated it is as destructive as the most aggressive malignancy and its devastation extends well beyond the life of the primary victim.

The tragic truth is that many misguided physicians still ignore or attempt to cover up evidence of a colleague's dependency upon alcohol or other drugs, believing such action to be helpful to their colleague. In reality this represents collusion with a colleague in self-destructive behavior. The kindest and most intelligent action one can take in such instances is to report your concerns to the Saskatchewan Physicians At Risk Committee.

S.P.A.R.C., a joint committee of the S.M.A. and the College, is staffed by physicians with knowledge and expertise in dealing with impaired physicians. They have demonstrated their ability to cut through the barriers of anger and denial that are invariably evoked when the impaired physician is first confronted with evidence of his maladapted behaviour. They have an understanding of the chemically impaired physician that results in a very high percentage of physicians being convinced of the merits of entering a rehabilitation program voluntarily.

The life of the impaired physician is often in significant disarray and his or her financial situation may often be precarious. In such instances financial assistance is readily available from the Medical Benevolent Fund to assist the impaired physician and his or her family through the rehabilitation program and the early recovery phase.

Among the most grateful physicians I know are some who were brought back from the brink of disaster by a friend or colleague who cared enough to report their concerns to the S.P.A.R.C. Committee. It is encouraging to see the return of rehabilitated physicians to productive lives that are lived much more contentedly one day at a time.

I would commend Carmen Johnson and Verna Scott for recognizing that the maladaptive behavior that portends a high risk of chemical dependency is often readily identifiable during medical school years.

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If identified and modified at that early stage, the physician and his or her family and patients might be spared a great deal of grief.

While we cannot say with any degree of assurance that such steps would prevent alcohol dependency in physicians, some of the authors' recommendations with regard to stress modification and the development of healthier stress management mechanisms do make a great deal of sense. We are, after all, not invincible and we each need to develop personal lifestyles that sustain and nurture our body, mind, and spirit.

The basic principles embodied in the A.A. program are often rejected by physicians as being simplistic and anti-intellectual. However, I have seen first hand how those basic principles applied on a daily basis can transform a chaotic chemically driven life to one of serene creativity and productivity. Medical students and practising physicians would do well to learn more of this program and to apply its principles in their lives.

4 Families

The Family of the Alcoholic*

Janet L. Dowsling, M.D.

Medical Consultant for The Jean Tweed Centre for Women Alcoholics, Humber Hospital Alcohol Program and the City of Toronto Rehabilitation Program

For those of us who are born 'the town drunk's child', shame is like our second skin. We are labelled at birth, and carry our label like a neon sign, for life. Embarrassment, humiliation, alienation, and isolation: these feelings are sometimes disguised as guilt, shyness, an inferiority complex or self-consciousness, but shame all the same and, as in the old Chinese proverb, we learn to keep it very secret.

A 'shame cycle' evolves. The secondary defences are protective mechanisms that develop as a result of the intensity of the feeling, and are an attempt to ward off the pain. These secondary defences may include anxiety, a feeling of being hurt, fear, rage, or simply a 'shutting down' of feelings or 'going blank'.

However, the feeling of shame must be dealt with directly — it must not be avoided for fear of it becoming internalized and part of a shame-based identity. Shame and guilt are closely related. Guilt is sometimes used as a tool to manipulate and influence our children's behavior; however, shame should never be used because of its devastating effects. An alcoholic family tends to scar its children for life by bringing them up in a shame-based environment, full of negative labels and outlooks, inconsistencies, and chaos. One of my patients made this comment about shame: 'I felt that because my family was alcoholic, working class, etc., I was not entitled to anything out of life. I wasn't even entitled to being treated well. I really think the shame thing carried over into all areas of my life and really held me back.'

Who is the alcoholic family?

There is no typical alcoholic family. The definition is simply a family unit negatively affected by a family member's alcoholism. Alcoholism shows no respect for race, creed, color or income. The amount of damage to family members varies according to the degree of dysfunction within the family, individual vulnerability, ego resources, and use of external battering agents, among many other factors. The four types of alcoholic families described by Kritsberg are as follows:

- I Alcoholic — family member is drinking
- II Alcoholic — family member has stopped drinking, family treated
- III Alcoholic — only grandparents drinking, family untreated
- IV Alcoholic — no family history but a family member is in the process of developing alcoholism.

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It is interesting to note that alcoholism may be a 'hidden factor' in the sense that it is not even actively present in this generation, yet the damage to the family unit is still present. This is because the family continues to live by the same rules, perpetuating the same myths. Thus, unless the family unit undergoes treatment or goes through a recovery process, its members continue to exhibit the same unhealthy behavior and suffer the same pain. Treatment professionals have known for years that it is not enough to treat the individual alcoholic — the family must experience some positive input and begin to trust each other again, before the family unit becomes a healthy environment.

How does alcoholism affect the family?

Alcoholism in a family member is characterized by a predictable response from other family members. The normal family responses which are beneficial in situations of physical illness or injury end up having an almost opposite effect when applied to an alcoholic. The family does everything it knows how to do and attempts to help in every way possible, yet the alcoholic returns to drinking again and again, escalating family stress. Thus, alcoholism ends up being a family illness, and both the patient and family must be involved in the recovery process.

To understand the phenomenon of alcoholism in a family, we must look at what a family is itself. First of all, it is the most powerful force in shaping human behavior. It provides the first 'terra firma' for a new baby to grow in and develop to his fullest potential. The environment needs to be safe, secure and trustworthy. What is learned in the family is carried over into the child's own family when the child grows to maturity and marries. Each husband and wife brings into the marriage a characteristic way of thinking, feeling and reacting that have been learned in their family of origin. Marital discord is often a clash of the value systems from two very different families of origin.

A family resembles a mobile. The mobile responds to changing conditions and, although its position may change, the parts remain connected. If a suspended part is moved, the whole system moves and, gradually, a new balance is brought about; so it happens in a family under stress. The whole unit shifts to bring about balance or survival. This dynamic exists in all families, In fact, sometimes, in an alcoholic family, the strings become so tangled that the mobile collapses, and outside help is needed.

Usually, the family will not admit that a member is an alcoholic until the illness has been critical for an average of seven years. Once it is acknowledged, the family often waits two more years before seeking competent help. The fact is that alcoholics can be helped, and the earlier the help is sought, the greater the chances of recovery. Alcoholism is a form of denial, and the alcoholic is locked into a phase of resistance to treatment. If the family accepts and participates in this denial, refusing to break the lock, the alcoholic often ends up dying of the condition because alcohol may be their psychological crutch, but their physiological curse.

Alcoholism draws people out of touch with reality, and the family, trapped into compulsive behavior, begins to believe its own defences to the point of becoming delusional. The extent of delusion renders them incapable of helping themselves, thus requiring outside help. The defence system of the family begins to parallel that of the alcoholic. This behavior is unwittingly developed by the alcoholic. He adapts these defence mechanisms to cause the least amount of stress to himself and, in time, each member of the family reacts correspondingly. Table 1 shows how the family response is tied to the behavior of the alcoholic.

The progression of alcoholism in the family is characterized by increased disturbances in the behavior and emotions of the family members. A family with a drinking problem usually experiences communication problems of varying degrees. People take turns hiding, covering up the drinking, being afraid, searching for the answers, and blaming, all of which produce confusion and loss of direction for each member of the family. The family's history is one of ambivalent feelings and unresolved problems. Family members pretend and deny reality, believing and hoping things will be different, and set unattainable goals for themselves and others. The relationships within the family unit are strained and tense, with each person feeling lonely and isolated.

One of my patients made an interesting observation about the purpose of denial: 'I think alcoholism chips away at the vital organizational link within a family, and the family is able to continue to function only when both the alcoholic and the family try to maintain the appearance of the 'OK' family structure by using denial — otherwise they would face total destruction and disintegration of their family.'

There is always verbal and emotional abuse in the alcoholic family; sometimes there may also be physical abuse and, in the extreme, sexual abuse. The children in this war zone have been described as 'survivors', and they truly are but, of course, as with all survivors, they carry the scars of battle.

Table 1 — Responses of family to alcoholic behavior

Alcoholic	Family
• Denial of alcohol dependency	Denial of alcoholic's disease
• Attempts to control drinking	Attempt to control alcoholic
• Obsession with alcohol	Obsession with the alcoholic
• Confused thinking	Confused thinking
• Uncontrolled drinking	Disorganization
• Merry-go-round of drinking	Merry-go-round of chaos

In order to illustrate the pathology even further, we can compare the environment of an alcoholic family with that of a healthy family (Table 2), and imagine what it would be like to grow up in each household.

Certainly, there are other kinds of family pathology which may produce an unhealthy dysfunctional setting, often similar to the above description of the alcoholic family. In fact, one sometimes wonders if the family unit is a very safe place to live!

Will the real 'hero' please stand up?

When life is chaotic, family members try to protect themselves by securing a fairly rigid position for themselves in the family mosaic. These pathological roles may overlap and even change through the years, but cause interference with spontaneity and with each person's development to his or her fullest potential. The main reason for these roles is to take the focus off the alcoholic and to try to 'make things better'.

The hero carries a big burden and responsibility to make the family look 'OK' by his achievements in school or work; often earns the bronze star for valor (jumps into the middle of physical battles on the homefront).

The lost child essentially disappears and never causes trouble; learns how to be a survivor by 'hiding in the trenches'.

The clown uses laughter and humor to take the focus off the family's troubles; also learns to use humor to maintain psychological distance.

The scapegoat is the troublemaker who 'acts out' to move the spotlight off the alcoholic; may get into trouble at school, work or with the law or, better still, becomes a worse alcohol- and drug-abuser.

The above rules are obviously generalizations, but likely exist in some form in every alcoholic family and, in fact, in most problematic families.

One of my patients pointed out that in this 'theatre of the alcoholic', after a prolonged run, the roles are difficult to step out of, and also, of course, a healthy audience does not always respond the way a sick house does.

What are the risk factors for survivors?

The biggest risk factor for the children who grow up in this alcoholic environment is that their concept of reality becomes so distorted that chaos becomes their norm. Due to the feeling of being out of control, they become expert manipulators and sometimes fanciful 'story-tellers'. In attempting to deal with the world from a position of poor self-esteem and from a shame-based foundation, very negative choices may be made:

- developing an alcohol or drug dependency
- developing a food-related disorder

- seeking intimacy with an alcohol- and/or drug-abuser or otherwise inappropriate partner
- tolerating physical and/or sexual abuse
- becoming a perfectionist and/or workaholic
- leading a very tightly controlled and controlling life with much anxiety

Even though the struggle to be seen as 'normal' requires a tremendous amount of energy, it is a primary goal for a 'survivor'.

Table 2 — Comparison of features of alcoholic and healthy families

Alcoholic family	Healthy family
• Fuzzy blurred boundaries	Clear, appropriate boundaries
• Rigidity	Flexibility
• Secretiveness	Openness
• Closed communication	Open communication
• Denial	Acknowledgment
• Emotional void	Enhancement of positive self-esteem
• Blaming	No blaming
• Outsiders — Keep out!	Welcome to outsiders!
• Isolation	Emotional closeness
• Difficulty with intimacy	Affiliated
• Fearful and mistrustful	Trusting
• Hopelessness	Optimism

Relationships cause the survivors a great deal of stress. They may have difficulty with issues of trust, control and feelings in general. Abandonment, both physical and emotional, may have left its mark so that the loneliness is often overwhelming. Fear, anxiety, anger and sadness are feelings that must often be dealt with and, of course, shame and guilt are always lurking in the background. Is it any wonder that survivors have such a difficult time establishing close emotional bonds? Most of them have never experienced one, so do not have adequate skills to participate, or the trust level required to allow anyone to become close. Often, to avoid the painful feelings in the alcoholic family, the survivor will learn to 'turn off' all feelings — that, at least, feels safe.

A most common scenario is for a survivor to struggle to survive in the alcoholic family of origin, only to start up a new relationship with an actively drinking alcoholic as their escape! It sometimes seems as though there is some magnetic force between survivors of alcoholic families and alcoholics, and so they match up their pathologies, and another alcoholic household is born.

People who grow up in the alcoholic family often have a variety of physical complaints. Most of them are stress-related, e.g. low back pain, irritable bowel syndrome, ulcers, diarrhea, headaches, muscle tension and allergies, fatigue and listlessness. All physical complaints should be investigated by a medical doctor. However, until the individual undergoes specific survivor therapy with regard to his alcoholic family, the symptoms may remain. In fact, the physical symptoms are really serving a purpose of relieving some of the stress, as most symptoms do.

A comparison of coping skills in healthy and alcoholic families

While it is true that trauma, stress and grief are part of the human condition and may occur in every family, the manner in which they are resolved may differ markedly. In a healthy family, the stressful event will be talked about in a supportive setting, allowing for emotional venting and, finally, resolution.

In the alcoholic family, silence is the rule. In this chaotic setting, there is more potential for greater stress and trauma, e.g. violent behavior, accidents, physical and/or sexual abuse, separation and divorce. These are certainly taboo subjects that are not talked about at all, let alone resolved.

Kritsberg describes this unresolved state as 'chronic shock' and states that 'over 50% of those raised in alcoholic families are, to some degree, in chronic shock'. In the alcoholic family, a crisis happens that triggers a stress reaction — rapid heart beat, shortness of breath and pumping adrenalin. Often, an emotional shutting down occurs at this time. Unfortunately, in this dysfunctional setting, there will be no resolution — family silence reigns. There is no close emotional support. In fact, the event is often denied and the person encouraged to forget about the problem, therefore causing him or her to enter the chronic shock state. In this situation, a small child often will write his own version of the event, and in the course of doing this, will blame himself, e.g. a divorce is felt as 'daddy going away because I've been bad'. Shutting down emotionally works very well as a technique to avoid pain; unfortunately, however, it often also interferes with experiencing pleasure and leaves one feeling 'emotionally constipated'.

The overwhelming feelings post-trauma are of hopelessness, helplessness and absolutely no sense of personal power.

What role can the family doctor play in the recovery of the alcoholic family?

An alcoholic's recovery is relatively easy; the alcoholic family's recovery is much more complex for these reasons:

- it involves more than one person
- the problem is rarely diagnosed and often denied or ignored
- it is usually not treated even when acknowledged
- resources for treatment are not known.

The family doctor can serve a key role in helping an alcoholic family to recover. First of all, simply acknowledging that the source of the problem may be the result of growing up in an alcoholic family often helps to begin the recovery process. It is also important to know what resources are available, including:

- Alcoholics Anonymous
- Al-Anon
- Adult Children of Alcoholics Groups
- individual therapy
- family therapy
- bibliography of helpful reading material.

Each survivor of an alcoholic family is unique. Their thoughts, feelings and behavior often make no sense to them or to other people, and they often wander from therapist to therapist with the problem going unrecognized. They feel 'stuck' and often comment that 'there is something missing in my life'.

It must be remembered, too, that rigidity and silence are two major pillars in an alcoholic family; therefore, resistance to change should be expected, and the pace may be slow. Although change is difficult for everyone, for a survivor who needs control, change is terrifying. What is needed is a trusting, supportive therapeutic relationship in which the family member can confront the 'demons of the past' and finally come to terms with them, guided by a nonjudgemental, caring therapist who mirrors reality, allows emotional venting and neutralizes the shame. Obviously, the physician or therapist needs a good grounding in family systems theory and an understanding of how the family is affected by alcoholism.

Recovery must be on all three levels: emotional, cognitive and behavioral. It is important to help the patient to write a healthier script and, specifically, a life plan that moves him or her along the continuum towards wellness. In addition, it is essential to keep the risk factors for survivors in mind, and to help the family members avoid or change those situations which are destructive.

Gravitz describes the six stages of recovery as:

- survival
- emergent awareness
- core issues
- transformations
- integration
- genesis.

I am a survivor and, as a professional, I work with survivors, so this paper has been written from both a personal and professional perspective. I do confess that I had a serious writing block prior to doing this paper and, of course, it was because the subject was 'too close' and the pain still remembered. I know it is hard to change, but I also know that anyone can do it — it just takes faith, trust and a little love — the stuff that moves mountains and heals hearts.

One of my survivor patients read a draft of this paper and made this comment about the personal-professional approach: 'It gives

what you have to say a double edge . . . you are real, human, present and accounted for; you too, have lived and partaken of the same pitfalls and pratfalls which have taken us all'.

This is true and I still continue to work on my own recovery. He also commented that 'the notion of survivors is based on the false impression that the war is over' and, of course, for many alcoholic families, the war is *not* over. The battle roars on and the wounds bleed profusely, causing much pain and suffering. To all of those still in combat, I wish you strength, courage and endurance.

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Techniques for the Recovering Person To Use In Parenting*

Patricia O'Gorman, Ph.D.

Psychologist, East Greenbush, N.Y.
Former Director, Division of Prevention for the National Institute on Alcohol Abuse and Alcoholism

Phillip Oliver-Diaz, M.S.W.

Director of substance abuse services for the Rockland County Dept. of Mental Health, Pomona, N.Y.

In the past 20 years, great strides have been made in the field of alcoholism: the disease concept is firmly rooted; treatment is widely available; and the stigma of alcoholism has been chipped away to some degree. Yet only recently has family treatment been seen as a need. Concern for children of alcoholics is a relatively new interest for providers, and little information is available. Parenting seems to be the area least focused upon by the alcoholism professional. This article, adapted from a chapter in *Breaking the Cycle* (O'Gorman and Oliver-Diaz, in press), provides information on parenting issues.

The recovering alcoholic generally walks into the parenting role with major deficits — either being the adult child of an alcoholic or coming from some kind of dysfunctional family (Goodwin and Guze 1974). In addition, the alcoholic has few role models for positive parenting. The basic pitfalls of early recovery, if not addressed, will inhibit healthy parenting.

Issues in recovery for the alcoholic

During years of active alcoholism, alcoholics have developed distorted beliefs concerning themselves and their families. They believed that it was safer to love alcohol than it was to love people and that there were only two options in life: to be totally out of or totally in control. They believed that people were not to be trusted and that to ask for help was a sign of weakness.

The alcoholic has learned to keep feelings a secret and to expect others to do the same. The world of addicted persons is one of lying, using, and manipulating. Their needs are made the focus of everyone. Thus for children, the first real test of recovery is to see whether alcoholic parents' attitudes have changed.

How addiction affects parenting

Many recovering people have a hard time understanding that just getting sober is not enough. Marie, a 35-year-old recovering alcoholic,

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has been married for 15 years. She is the mother of a 10-year-old boy, Austin, and a 14-year-old girl, Nancy. Her husband, Jack, has accused her of being as selfish and self-involved now as she was when she was drinking. Her children seem not to trust her, and they resent the time she spends at Alcoholics Anonymous (AA) meetings. All of this is confusing to Marie. She cannot understand why her family does not appreciate how hard she has worked to get sober. What Marie does not understand is that while staying sober, she is still operating under her old alcoholic belief system. Her children observe this. Because they remember her old behavior patterns, they need to perceive meaningful change before trusting her again.

Rule: *Remember, being a recovering alcoholic is only one of many roles, with spouse and parent roles being most important to the family.*

It is quite common for recovering alcoholics to see themselves only in terms of their own problems. Their drinking and recovery, they feel, should be primary to their family. Their identification with recovery is the most significant feature of their lives. Fulfilling the AA program is their primary purpose. In the enthusiasm of finding a new way of life, alcoholics often forget that the Twelve Step program is not separate from life but was designed to be incorporated within it. With recovery, they should become more productive workers, lovers, sons, daughters, husbands, wives, and parents.

To discuss compulsively their progress in combating their "fatal disease" is an error. The family needs to see a spouse or parent, not just a recovering alcoholic. In order for true recovery to take place, the focus in the family should shift from the needs of the alcoholic to the needs of the individual family members.

Rule: *Impart information in an appropriate manner.*

Another error made by recovering alcoholics is to describe inappropriately their disease to their young children. The natural reaction of a child whose parent has gone into remission from a serious illness is to avoid any discussion of the illness once the parent is better. This allows the child to experience a period of safety and security in the knowledge that the parent is better (Klein 1932).

Children of parents with alcoholism are no different from other children. They do not need to hear that alcoholism is a fatal disease from which their parent still suffers and only recovers slightly each day. Young children cannot possibly understand this concept. The alcoholic parent needs to describe alcoholism carefully in an age-appropriate manner. The alcoholic should assess the effects on children of such discussions and the most constructive manner in which to convey necessary information.

Rule: *Own your own feelings and allow children to own theirs.*

In healthy families, adults help children identify their own feelings and they support the children's right to have them (Ginott 1965). This is not easy for the alcoholic person. Feelings are threatening. Alcohol, food, and chemicals have been used to anesthetize emotions. Any

expression of them is considered dangerous. Because so many people with alcoholism come from dysfunctional families, they have not learned to identify their own feelings. They, therefore, dismiss feelings they cannot identify. Recovering alcoholics often are learning to understand feelings at the same time that their children are learning to understand their own.

Alcoholics often react negatively to their childrens' emotional expressions because they do not feel adequate to respond. They have no personal experience on which to draw. Too often, their response to the exhibition of strong feelings is to attempt to stop the child's emotional expression, and, thereby, to lower their own level of anxiety.

Children learn to dismiss or hide their feelings so as not to suffer the displeasure of their parents. This is a repeat of the cycle of denial that most alcoholic people went through as children. This cycle breeds resentment and erodes self-esteem. It also sets the stage for the next generation of alcoholism (O'Gorman 1975).

Rule: *Learn to survive feelings.*

The belief of most alcoholic people is that they cannot survive the experience of certain feelings such as anger and sadness. To the degree that alcoholic parents do not deal with these dormant feelings in themselves, they will find ways to avoid dealing with them in their children.

Rule: *Think before you act.*

An impulse is a sudden inclination to act without thought for the consequences (Random House 1983). Most alcoholics have problems with impulse control. They eat or drink on impulse. They marry or take jobs on impulse. During active addiction, a lack of impulse control affects parenting. This results in children from alcoholic households having problems with determining what is right or wrong behavior. The rules keep changing. They learn that consistency is not expected. This breeds potential problems for the children both in school and, later, in the work setting, where rules must be followed and respected (Reiner and Kaufman 1959).

Children of recovering alcoholics often report that among the most frustrating aspects of recovery are the humiliating things their parents do to them. They can never predict what their parents will do next. Security and predictability, two of the most fundamental cornerstones of a healthy childhood, are lacking. The child of the recovering alcoholic is constantly on guard, because the alcoholic is still unpredictable. The children still fear that they will be humiliated by some thoughtless action. The recovering alcoholic must take care to heed this fundamental aspect of parenting.

The other side of impulsive behavior is compulsive behavior. Compulsion is defined as an irresistible urge (Random House 1983). A compulsion is different from an impulse in that it is repetitive, restrictive, and rigid. Compulsions are hard to break, as any alcoholic knows. The compulsion to drink is the first major challenge with which recovering alcoholics are faced. But once this compulsion is overcome,

other compulsions must be faced to enable the alcoholic to become a healthy parent. A healthy family is an open family in which there is room for growth and change. If negative compulsive rituals are enforced, the recovering family will feel locked in and hopeless.

Rule: *Progress, not perfection, is the goal.*

Perfectionism is sometimes a major problem for alcoholic people. It interferes with all aspects of their lives but is particularly destructive to healthy parenting. In simplest terms, perfectionism is the constant demand to meet excessive, unattainable standards. Perfectionists always have the gnawing doubt that they are not good enough. They believe that they can win love and acceptance only through performance.

The path to health as a parent is filled with many imperfections. If recovering alcoholic parents approach the task of parenting with perfection as an ideal, they will fail. Admitting imperfection brings with it the opportunity to learn and grow and allows the family to do the same. Everyone needs to make mistakes to learn, especially children. Mistakes should be met with understanding. Goals need to be attainable because it is in successful goal accomplishment that children build self-esteem (Marks 1982). If children are brought up with the message that they are not good enough, they will grow up without the ability to enjoy their accomplishments. The only way to avoid perfectionism in parenting is to learn to be less of a perfectionist with oneself (Arnold 1978).

The role of the treatment agency

The alcoholism treatment professional needs to help clients to accept their limitations and to develop behavioral approaches to overcome perfectionist tendencies. The only way to accomplish this is by incorporating an organized approach to parenting into treatment programs. Sending home a sober parent must no longer be the end point of an alcoholism rehabilitation program.

Summary

Parenting is affected by alcoholism. Recovering alcoholic parents need to be aware of some basic pitfalls. The expression of feelings is one. This is threatening to persons with alcoholism, because they often come from families in which the expression of feelings was forbidden or abused. They have learned to anesthetize their feelings with alcohol, so dealing with the feelings of their children creates anxiety.

Impulsive and compulsive behaviors are other problems. Recovering persons need to examine their behavior and its impact on their spouses and children. The disease concept of alcoholism, itself, can be troublesome to children if not explained in a way they can understand. Recovering alcoholics should be careful not to use AA-specific terms when explaining their disease and not to raise anxiety in their children or make them feel insecure. Identity as an alcoholic can

become a barrier if it is the most important identity a parent has. The role as parent is as significant to the family as the role of recovering alcoholic is to the alcoholic.

Progress, not perfection, is the alcoholic's goal. Parenting training must be incorporated into alcoholism rehabilitation. The healthy parent or family is one that allows family members to learn from their mistakes. Healthy parents increase self-esteem in their children and offer a safe and secure environment. With self-awareness and discipline, recovering alcoholics can be healthy parents.

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Clues for the Diagnosis of Incest / Sexual Abuse*

Johnson Institute Training Curriculum, 1986
Sue Evans
Susan Schaefer

I. Behavioral clues

[Victims of incest (and often other sexual abuse) frequently act out their pain in a variety of seriously self-abusive ways; this is almost as if to acknowledge overtly the pain they are experiencing, and to achieve some congruity between their "insides" (feelings) and their "outsides" (that part visible to others). Among those persons with whom incest has not yet been diagnosed nor therapy commenced (and with whom either overt or covert incest is eventually determined), the following behaviors often emerge as a pattern typically observed.]

A) CHEMICAL ABUSE/DEPENDENCY

B) SELF-MUTILATING BEHAVIORS
- cutting, scratching, or hitting self
- burning self (especially with cigarettes)
- carving patterns in skin
- pulling hair out
- sticking pins in body
- tattoos (pay attention to the message)

C) INABILITY TO MODULATE STRONG FEELINGS
- associating of anger with violence
- punching out windows or walls
- flaring with anger, at times over minor things; yet
- use of a passive-aggressive style of expressing anger
- overreactive, dramatic quality to dealing with stress
- multiple somatic complaints without physical ailment

D) SUICIDE ATTEMPTS

E) EATING DISORDERS†
- Anorexia Nervosa
  1. intense fear of becoming obese; does not diminish with weight loss;
  2. disturbance of body image, e.g. claiming to feel "fat" even when emaciated; preoccupation with one body part; preoccupation with mirrors;
  3. loss of 25% of body weight (or body weight plus projected gain from growth);

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† Acknowledgement for use of diagnostic criteria to American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders, 3rd edition*, 1982.

4. refusal to maintain body weight at a normal minimum weight;
5. weight loss not due to any known physical illness;
6. client often does not demonstrate awareness/appreciation of their problem;
7. ritualistic, often bizarre behaviors associated with purchasing/preparing/eating of food;
8. appears needy for attention, control.

- compulsive overeating
- Bulemia
  1. recurrent episodes of binge eating;
  2. at least three of the following: binging on high-caloric, easily ingested foods; concealed eating during binging; termination of binging by abdominal pain, sleep, social interruption, or self-induced vomiting; repeated attempts to lose weight by severe dieting, by self-induced vomiting, by use of cathartics/diuretics, or by any compulsive purgative action; frequent weight fluctuations greater than ten pounds due to alternating binging and fasting/purging.
  3. awareness that the eating pattern is abnormal; fear of not being able to stop eating voluntarily.

F) TRUANCY, INCORRIGIBILITY

G) ISOLATION AND INABILITY TO RELATE TO PEERS
- withdrawal
- teens will prefer to associate with older peers
- chronic inability to trust (they've been betrayed)

H) BEHAVIORAL PRESENTATION WELL BEYOND AGE APPROPRIATENESS
- "pseudo-mature"; acts much older than age-appropriate
- sexual knowledge and sophistication too advanced

I) BOUNDARY AMBIGUITY
- boundaries with others are often rigidly distant, or
- enmeshed and confused

J) SEXUAL ACTING OUT
- compulsive sexual behavior
- seductive behavior (manipulative sexual behavior)
- selling of sex (prostitution, pornography, stripping)

K) SEXUAL SELF-ABUSE
- attempts to desexualize self
  - — obvious attempts to hide behind clothes
  - — binding breasts or genitals
  - — cutting or harming sexual body parts
  - — clothing rejects gender-appropriate norms
- involvement in sado-masochistic sexual behaviors

L) SLEEPING DISORDERS
- recurrent attack nightmares
- fear of falling asleep

M) VICTIM BEHAVIOR
- passivity — always willing to accept blame
- behavior which provokes others and sets client up for attack, vulnerability, powerlessness
- failure to protect or take care of self properly
- denial of responsibility for the foregoing

N) FEAR OF INTIMACY
- chronic approach-avoidance conflicts in relationships
- cyclic pattern of destructive, dependent relationships
- states feelings of being overwhelmed, losing self in relationships
- unexpected avoidance of being touched

O) ROLE REVERSAL
- assuming parental responsibilities
- caretaking, nurturing of parents
- feeling responsible for parents' feelings
- protecting parents — covering up for them
- sets others up to be caretakers

II. Psychological clues

A) SHAME

B) SELF-HATRED

C) IDENTITY DIFFUSION: NO CLEAR SENSE OF SELF; ENMESHMENT; GENDER CONFUSION

D) DISSOCIATIVE, SURFACE BEHAVIOR: DIFFICULTY "TRACKING"; MAIN DEFENSES ARE DEPERSONALIZATION AND DENIAL

E) SENSORY DYSPERCEPTIONS; HALLUCINATIONS; WONDERS WHETHER SEXUAL ABUSE WAS A DREAM

F) LARGE PSYCHIC/SPACIAL NEEDS; FEAR OF TOUCH

G) GUARDEDNESS; INABILITY TO TRUST

H) CHRONIC DEPRESSION, DESPONDENCY, HOPELESSNESS

I) LOW SELF ESTEEM, FEELINGS OF WORTHLESSNESS

III. Family system dynamics

- SOCIALLY ISOLATED
- RIGID/ENMESHED BOUNDARIES
- AUTHORITARIAN
- CHEMICALLY ABUSIVE
- MYTHS USED TO EXPLAIN THINGS OR EXCUSE BEHAVIORS
- CONFUSED AND DEHUMANIZING ALLIANCES
- SECRET COLLUSIONS
- RELIGIOUS, OFTEN EXAGGERATEDLY SO, OFTEN FUNDAMENTALISTIC
- SHAME-BASED
- ECONOMICALLY STRAINED OR PREOCCUPIED

- RIGID NO-TALK RULE
- CHILDREN ARE TREATED AS PROPERTY
- HISTORICAL, INTERGENERATIONAL PATTERN OF ABUSE
- TRIANGULATION

IV. Behavioral clues (covert) to be explored with the client regarding the perpetrator

DID THE PERPETRATOR . . .

- try to seduce the client's young friends?
- tell dirty stories to client, view pornographic materials with client, or share explicit details with client about his/her sex life?
- ridicule client's developing body?
- repeatedly make accusations to client or punish client for being sexual when it wasn't true?
- physically punish client while naked or force client to strip clothing before receiving the punishment?
- sleep with client when feeling needy?
- fail to respect client's requests for privacy while dressing, in the bathroom, or at other times when client did not want intrusion?
- ask client not to be seen around the house in pajamas, bathing suit, or other attire which may suggest uncomfortableness with client's body?
- gaze at client in ways client felt were sexual glances?
- Has the client ever been afraid someone in the family might become sexual with him/her?

Domestic Violence and Alcohol*
Barriers to Cooperation

Arleen Rogan

Resource Materials Coordinator, National Clearinghouse for Alcohol Information, U.S.

For more than a decade, practitioners and researchers have noted that alcohol abuse and domestic violence frequently occur in the same families (Gelles 1972; Hindman 1979; Roy 1977). For this reason, many who have worked with dually affected families have cited the necessity for developing cooperation among alcoholism counselors and those who work in the domestic violence field (Lehmann and Krupp 1984*b*; Potter-Efron and Potter-Efron 1985; Wright and Popham 1982). In some instances, practitioners and researchers have called for an integration of services to provide for those clients in whom these problems overlap (Lehmann and Krupp 1984*b*). But despite this widespread agreement in the literature that such collaboration is imperative if the cycles of alcohol abuse and battering are to be successfully interrupted, there remains a reluctance on the part of many in both treatment areas to work together and, to date, few programs have successfully integrated services to assist families suffering from both problems (Hans 1985; Lehmann and Krupp 1984*a*; Potter-Efron and Potter-Efron 1985).

This article reviews some of the reasons for service-provider cooperation in these fields; examines some of the gaps in knowledge, conflicting attitudes, and practices that impede development of such cooperation; and discusses some of the experiences of those who have worked with dually affected families.

Reasons for cooperation

The most frequently cited reason for establishing cooperative links among practitioners in the two fields is the close association of alcohol abuse and domestic violence: many families suffer from both problems. Some researchers have estimated the incidence of alcohol problems in families experiencing violence to be as high as 80 percent (Roy 1977). Others set the incidence at 50 to 75 percent (Katz 1982); and still others put it in the range of 25 to 30 percent (Flanzer 1984). No research data support the contention that alcohol causes men to batter or that family violence causes alcohol abuse, but many practitioners believe that the two problems interact, each exacerbating the other (Flanzer 1984; Gibbons 1985).

When alcoholism counselors and those who work in the area of domestic violence do not understand how frequently the two problems are associated, or if they fail to recognize the impact that such dual

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affliction has on their clients, they may miss an important opportunity to intervene in the cycles of abuse (Potter-Efron and Potter-Efron 1985). If lack of knowledge is further compounded by erroneous attitudes about alcohol abuse or domestic violence, such counselors and workers will continue to be reluctant to seek referrals for clients (Hans 1985; Wright and Popham 1982).

Lehmann (1985) notes that many advocates for victims of abuse are wary of the trend toward family therapy in alcoholism treatment. Such workers are concerned that unless alcoholism counselors are alert to the possibility of violence in families where alcohol abuse is a problem, the violence will remain unnoticed, and potentially dangerous situations will continue unimpeded (Flanzer 1984; Hans 1985).

In addition, if counselors are not sensitive to the patterns of spouse abuse and the role that alcohol can play in the abuse dynamic, they run the risk of relying on treatment techniques that inadvertently blame the victim for engaging in "enabling" behaviors while presumably absolving the "ill" abuser of responsibility (Wright and Popham 1982).

Hans (1985) believes that similar gaps in knowledge exist among those who work with the victims of domestic violence. She notes that many such workers believe that alcoholism treatment is concerned only with achieving sobriety. But, she notes, that is only the first step: "If someone is really working the AA (Alcoholics Anonymous) program and is being counseled for alcoholism, he comes to learn that he really has to make positive changes in his life. It is often the case that the domestic violence worker does not understand what alcoholism treatment is all about."

The literature frequently points to the similarities that exist between family violence and alcohol abuse (Flanzer 1984; Potter-Efron and Potter-Efron 1985; Sanchez-Dirks 1979). Many have noted that both problems are intergenerational (e.g., Flanzer 1984; Sanchez-Dirks 1979). Flanzer (1984) reports that in his view the most significant similarity is that neither problem drinking nor family violence abates until some sort of crisis occurs. Also, alcohol abusers and batterers both tend to blame their victims for their behavior and both tend not to remember details surrounding events related to their problems (Flanzer 1984). Victims of violence and spouses of alcoholics, on the other hand, tend to be isolated and to accept guilt and blame for the abuser's behavior (Flanzer 1984). Both partners in both types of families tend to have a dependent attitude, to have low self-esteem, and to be impulsive (Potter-Efron and Potter-Efron 1985).

In addition, families experiencing violence and those experiencing alcohol-related problems are both characterized by "an acceptance of loss of control as a means of coping with the world" (Potter-Efron and Potter-Efron 1985). And, finally, both types of abuse seem to be associated with retarded emotional development among family members (Potter-Efron and Potter-Efron 1985). However, alcohol abuse and violence also appear to provide payoffs in the shortrun in that they "resolve a problem, establish mastery over the moment, and

reduce feelings of hopelessness, depression, and despair" (Flanzer 1984).

Barriers to communication

Why, then, is there so much reluctance on the part of program planners and practitioners to form the links and to integrate alcoholism and domestic violence services when appropriate? The answer lies, in part, in the knowledge gaps, disparate attitude among helping professionals, and the treatment practices characteristic of these two different areas.

Along with the apparent recognition of the close association of the two problems, there coexist multiple interpretations about what that association means. Also, even when practitioners agree on the interactive nature of these problems, there remains a wide range of views about how best to intercede. These differences in approach often are predicated upon different frames of reference for explaining how the problems arise and how to allocate responsibility for change. While the research data reveal the frequency with which these problems are associated, the answer as to how best to resolve them has not yet been developed.

Today, among treatment professionals there exists a broad range of explanations for how to treat alcoholism, domestic violence, and the relationship between the two problems. These explanations in part determine the nature of the services provided as well as the objectives for those services. What follows is a brief review of the issues that separate alcoholism professionals from those who work in the field of domestic violence, together with some suggestions and comments from those who work with dually affected families.

Gaps in knowledge and experience — Alcoholism counselors and those who work with victims of domestic violence often have little training in each other's fields. Alcoholism counselors, for instance, frequently don't know how widespread domestic violence is, in part because their clients are reluctant to reveal events about which they may feel shame (Hans 1985). Domestic violence workers have little knowledge about what alcoholism treatment is all about and often fail to refer clients who might benefit from those services (Lehmann and Krupp 1984*a*).

A recent study of workers in both fields (Lehmann and Krupp 1983/84) revealed that alcoholism counselors often are not aware of services available for victims of domestic violence or their abusers and that some are unsure of the necessity for coordinating such services with treatment for alcohol problems. The same study indicated that although domestic violence workers make referrals to agencies who provide service for alcohol-related problems, their knowledge is often limited to such services as Alcoholics Anonymous and Al-Anon. Furthermore, the domestic violence workers in this study did not know how to recognize and deal with client problems that are associated with alcoholism.

Attitudes and Practices — Those who work with clients with drinking problems and those who work with victims of domestic violence often differ in their approaches to the dually afflicted family. These disparate approaches frequently spawn attitudes that can interfere with understanding how to help the clients and can create barriers toward cooperation in providing service that might truly aid such a family.

Despite lack of supporting evidence, alcoholism counselors often believe that domestic violence is a symptom of alcoholism (Gibbons 1985; Hans 1985; Wright and Popham 1982) and assume that once sobriety is achieved, the violence will abate. For the provider of services to victims of abuse, on the other hand, the violence is the primary problem (Lehmann and Krupp 1984*a*; Wright and Popham 1982).

In addition, some providers to victims and perpetrators of violence believe that battering and other forms of domestic violence result from cultural beliefs favoring violence as an acceptable way of controlling others (Wright and Popham 1982) or from social tolerance of violent behavior (Gibbons 1985).

The issues of what causes violence, how to assign responsibility in dually affected families, what role alcohol plays in domestic violence, whether to treat the violence or the chemical dependency first, and whether to provide individual or group counseling — all are areas of disagreement among those who provide services.

Treating family violence as a symptom of alcoholism is a key issue in view of the current trend to treat alcoholism as a family disease. This approach becomes problematic if the counselor does not recognize that violence is a specific problem requiring specific treatment (Hans 1985; Lehmann 1985; Wright and Popham 1982).

In addition, many who treat alcohol problems believe that the partner who does not have a drinking problem "enables" the partner who does drink to do so abusively. This concept of enabling behavior is viewed with suspicion by many domestic violence workers because they believe that the behavior referred to as "enabling" is very often the same behavior that allows victims of abuse to survive (Lehmann 1985; Wright and Popham 1982). Furthermore, those who work with victims of violence believe that until a woman feels safe from violence, she will be unable to examine her behavior as it relates to her husband's chemical dependency.

The issue of responsibility is a crucial one for those who work with dually affected families. Hans (1985) contends that personal responsibility is a key treatment issue for both abusers and victims because each tends to blame the other: "She says, 'if only you'd stop drinking'; he says, 'if only you'd stop nagging.'" Hans cautions that "it is important to achieve some separation because these couples are so enmeshed" (Hans 1985).

The major objective of Abusing Men Exploring New Directions (AMEND), a Denver-based treatment program for batterers, is to help

clients take responsibility for their own violence (Katz 1982). Many batterers who enter treatment do so because they are pushed into it. They then blame their difficulties on whoever pushed them — the police or their wives — and refuse to acknowledge responsibility for their behavior (Gibbons 1985).

Neidig and his coworkers (1985) believe that both partners participate in abusive behavior. The Domestic Conflict Containment Program (DCCP), a program designed to assist troubled families in the Marine Corps, does stress, however, that abusers must accept responsibility for their violent behavior. The DCCP strives to achieve a difficult therapeutic balance:

> It is important that the facilitator maintain a balance . . . between being too confrontive (which would mobilize defenses and resentment) and too accepting (which would permit the avoidance of responsibility) (Neidig et al. 1985, p. 201).

Many who work with women who are victims of abuse are reluctant to acknowledge a woman's facilitative role in her own victimization. Wright and Popham (1982) assert:

> Battered women do not provoke violence, are not sick, do not need therapy, and are not addicted to the violence perpetrated upon them . . . the concept of 'enabler' is inappropriate when dealing with the violence perpetrated on battered women. (p. 57)

These conflicting attitudes are reflected in the types of services provided to those with alcohol problems, batterers, victims of abuse, and families affected by alcohol problems. As a result, services that are provided to dually affected families are frequently fragmented and sometimes provide conflicting messages.

Wright and Popham (1982) go on to delineate the fragmentation as one of focus:

> The (alcoholism) field focuses primarily on the individual abuser, providing services to the other family members largely in support of the abuser's efforts to end his chemical dependence. Woman abuse programs deal primarily with the victims of abuse, helping them to restructure their lives to become free of the abuser's violence. (p. 56)

Those who provide services in woman abuse programs do not believe women are in need of therapy but they need "skills for living a life at least temporarily independent of the abuser" (Wright and Popham 1982).

Many who work in the domestic violence field recognize that many women return to husbands who have abused them (Gibbons 1985; Hans 1985). These workers emphasize the importance of providing services for the alcohol abuser and the batterer and of coordinating these services with those for the victims of battering. However, even these practitioners differ in their opinions on delivery of services.

Lehmann and Krupp (1984*a*), noting that it is important to view the family as a system, caution that "in families dually affected by alcoholism and domestic violence, couples or family counseling should

not begin until the abusive behaviors are controlled." Flanzer (1984) believes that successful treatment of such troubled families requires that both the chemical dependency and the violence must stop before progress can be made. But, he notes, because of the dangers inherent in violence, "family violence must take precedence as the treatment focus." Wright and Popham (1982) concur, noting that the "primary problem for the woman with a violent, chemically dependent partner is the violence."

Neidig and his coworkers (1985), however, believe that both partners contribute to abusive behavior, though not necessarily in equal proportions or in similar ways. It is essential, therefore, that the partners be dealt with together because intervention that requires "rescue of the wife and individual treatment or punishment for the husband frequently compounds the problem."

Hans (1985) stresses the importance of both members of a couple receiving individual counseling. In her view, the locus-of-control problem — that is, inability or unwillingness to assume responsibility — is an issue for both partners, as is the emotional enmeshment each feels. Lehmann and Krupp (1984*b*) concur, noting:

> When the abuser attains sobriety and demonstrates that he can interact with the battered spouse without being violent or coercive, then couples counseling may be appropriate to redefine and build the relationship. . . . Such methods, however, should be used judiciously in treatment. (p. 114)

Neidig and coworkers explain that the philosophy of DCCP services is based on the view that "violence is primarily a function of specific skill deficits on the part of the couple." As a result, the program focuses on helping both partners acquire new skills that will eliminate the violence and enhance communication. Neidig and coworkers (1985) believe that it is important to see both partners together: "Although seeing the couple together may inhibit full disclosure of details of violent history, this arrangement seems preferable to the increase in suspicion . . . which often follows individual sessions."

A view to the future

Many who have worked with dually affected families agree that more steps are needed to facilitate networking among alcoholism counselors and those who serve families suffering from domestic violence. Lehmann and Krupp (1984*a*) conclude:

> There is a definite need for more information, awareness, training, cross-fertilization, and development of referral networks for practitioners in the domestic violence and alcoholism fields. (p. 27)

Sanchez-Dirks (1979) noted that training programs to help domestic violence workers identify and handle alcohol problems among their clients as well as programs to train alcoholism counselors to recognize family violence were essential to control both types of abuse. Lehmann and Krupp (1984*b*) have proposed a three-component program designed to address the needs of dually affected families and those who serve them. By providing support and referral services to

abusers and victims — of both alcohol and violence, by training professionals, and by developing referral networks, they say, some of the fragmentation can be alleviated.

Flanzer (1984) offers the following suggestions to those who counsel dually affected families:

- Recognize the intermingling of domestic violence and problem drinking by asking clients about their drinking and violent behavior — "when, where, and how much."
- Do not tolerate either problem drinking or violent behavior: "The family is looking for someone to temporarily take control."
- Help family members assume responsibility for their behavior and to be accountable to one another: "To do so . . . is to encourage similar strength . . . of other family members."

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Adult Children of Alcoholics

Dan Pope

Minister of Counselling, Regina

Alcoholics are well known for their strongly entrenched denial systems. Also, the family has its own denial system and adult children of alcoholics are certainly no exception. Many adults who grew up in alcoholic homes fail to relate the pain they are in now to having grown up in such an environment. They seem to believe they are able to leave all that pain behind them when they leave the home. Children of alcoholics learn to "freeze" their feelings and this pattern continues into adulthood. For these reasons our "Introductory Workshops for Adult Children of Alcoholics" focus on beginning to break through the denial system and "thaw" some of their frozen feelings.

The workshops are conducted on Friday nights and all day Saturdays and, although the content is constantly changing, areas such as the following are addressed:

1. **Coping Roles**
   Identifies the five common coping roles assumed by children of alcoholics—Remarkable Child, Rescuer, Rebel, Class Clown, and Invisible Child. Examining how these roles are played out in adulthood is an important part of the workshop.
2. **Feelings**
   Discusses the common feelings experienced by family members of alcoholics—shame, guilt, remorse, rage, and so on. In addition the family rules identified by Claudia Black—don't talk, don't trust, don't feel—are explained.
3. **Childhood Demands**
   Helps the participants to identify the demands placed on them as children, and how they responded and continue to respond to them.
4. **Shaking Your Family Tree**
   Dependencies of various types (alcohol, other drugs, food, gambling, sex) are often found in generations of family members. This lecture helps to trace these dependencies through the family tree.
5. **Characteristics of Adult Children of Alcoholics**
   Characteristics such as Performance Orientation, the Go-Away-Closer Syndrome, Rainbow Chasing, and Parental Inversion are discussed.

The primary purpose of the workshops is to help the participants begin to identify and examine the various ways they have been affected by growing up in an alcoholic home. In addition they are encouraged to become involved in support groups, therapy, and/or treatment programs.

Adult Children of Alcoholics: Selected Readings

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5 Other

Alcohol — its epidemiology and magnitude*

Saul Cohen M.D.

Epidemiology

The use of alcohol is a complex and difficult issue. Although it brings pleasure and employment to many people and revenue to governments, its use can have serious health, emotional and social problems. Epidemiologic studies show that hazardous alcohol consumption (40 or more drinks/week) increases the risk of certain diseases and death. However, some evidence indicates that moderate use of alcohol (i.e. one or two drinks daily) may be associated with good health. Moderate use of alcohol may be related to a degree of social integration which, in turn, has been found to be independently related to good health. Measures of alcohol which are equivalent to one drink include beer 340 g (12 fl oz), wine 114 g (4 fl oz) and whisky 43 g (1.5 fl oz).

Drinking practices are influenced by many factors such as:

- population characteristics
- social structure
- cost of alcohol and its availability.

There is a growing incidence and prevalence of alcohol use, abuse and dependency by society, to the detriment of physical, mental and social well-being. Indicators of the magnitude of the problem include:

- per capita consumption
- health problems
- impaired driving
- government revenue
- social costs.

Per capita consumption

In the last 10 years, wine consumption has increased by 27% accompanied by a slight decline in spirit and beer consumption. In 1978, the average adult Canadian (15 years and older) was annually consuming 2.56 gallons of absolute alcohol compared with just under 2 gallons in 1970; this represents an increase of 33% in the national per capita consumption.

The differences in increased consumption of the three main kinds of beverages were:

- beer, 22%
- wine, 26%
- distilled spirits, 52%.

This shows that Canadians have not only been using a greater amount of alcohol but have also been consuming more drinks of higher alcohol content.

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However, a recent publication entitled 'Alcohol in Canada. A national perspective, 1984' indicates that there has been a stabilization in alcohol consumption over the last 3 years.

Recent changes in alcohol consumption

Although wine has the smallest share of the alcohol market, its share is increasing steadily and consistently throughout Canada, and has been influenced by factors such as affluence, drinking by women and young people, and increased drinking with meals. Beer consumption declined by 5% between 1975 and 1980; the brewing industry is responding with an aggressive mass advertising program focussed on youth and women, because of consumer changes of taste, keen product competition and higher provincial and federal taxes.

Patterns of alcohol consumption

Age and sex: according to age and sex, there are substantial variations in alcohol consumption patterns in the type of drinker and the weekly volume of alcohol consumed. Current drinkers are those who drink alcohol at least once per month and heavy drinkers are those who have 14 or more drinks of alcohol/week. About 65% of adults are current drinkers.

The highest proportion of current drinkers is found in 20-24-year-olds (79%) and 25-40-year-olds (73%). At every age, there are more men than women who are current drinkers. Men are more likely than women to be regular consumers of alcohol, and are also much more likely to drink more heavily.

Marital status: married people are more likely to drink alcohol than single people (57% compared to 47%), but single people, especially if separated, widowed or divorced, are more likely to be heavy drinkers.

Income: the proportion of alcohol users increases directly with income. Although there is some evidence of a direct relationship between income and the proportion of heavy drinkers among males, there is a higher proportion of heavy drinkers among low income females.

Occupation: Alcohol consumption patterns show marked variation by occupation. Alcohol is drunk at least once per month by 77% of the working population while only 50% of homemakers and retired persons are current drinkers. Working people are more likely to drink 14 or more drinks/weeks.

Provincial trends: the highest consumption rates are found in:

- the Yukon
- Northwest Territories
- British Columbia
- Alberta
- Ontario
- Manitoba.

From 1970 to 1978, the population of drinkers increased steadily from east to west (i.e. from 55% on the Atlantic coast to 73% in British Columbia) but regional differences appeared to stem from differences in the proportion of female drinkers, with a higher proportion found in the western regions. In 1970, the Atlantic provinces were ranked lowest but, towards the end of the 1970s, per capita consumption in Prince Edward Island and Newfoundland exceeded consumption in Quebec and Saskatchewan. In Saskatchewan, per capita consumption between 1961 and 1981 rose 66% from 1.37 gallons to 2.28 gallons of absolute alcohol, as compared with the national average of about 2.56 gallons/year. Adult inhabitants of British Columbia consume five times as much wine as those in Newfoundland, those in Alberta twice as much spirit as those in Quebec, and residents in Yukon twice as much beer as those in Saskatchewan.

Age groups at high risk for heavy drinking

Adolescents and young adults: despite an overall decrease in alcohol consumption, consumption is increasing rapidly in adolescents and young adults. In this age-group, heavy drinking tends to be the acute 'binge' type rather than the continuous regular drinking found in older adult groups.

If 14 or more drinks/week is used to define the heavy drinker among teenagers, 1/8 male teenagers and 1/30 female teenagers are heavy drinkers. In young adults, heavy drinking is associated with more regular drinking than among the teenage group. Some 1/5 heavy alcohol users are young adult males, compared with 1/20 young adult females. In 1978, the number of young adult heavy drinkers was estimated at more than 540,000, with 430,000 being males and 110,000 being females.

Elderly: heavy drinking in the elderly not only suggests problems associated with alcoholism, but also social and personal problems such as loss of spouse or job, separation from children, and physical and/or mental disabilities. Over 20% of Canadian male heavy drinkers are over 60 years of age, representing a group of about 200,000 people. However, only 5% of elderly females, or approximately 47,000, are heavy drinkers.

Native groups at high risk for heavy drinking

An example of native groups at high risk for heavy drinking is a population of some 30,000 people, in an area of 96,000 square miles in northern Saskatchewan, comprised of approximately 30% Metis, 30% Treaty and 30% Caucasian. The north has a very young population with approximately 26% under 14 years of age and 58% under 24 years of age. Most of the population is scattered in very small pockets and only five communities have a population over 1,000. The present rate of unemployment in northern Saskatchewan is estimated at 40%, with the provincial average at 8%. About 80% of students will drop out toward the end of secondary school compared to the national rate of 25%. Despite the much lower per capita income in

northern Saskatchewan compared to the southern half of the province, the relative consumption of alcohol is approximately the same. Thus, a greater percentage of the average northern family's disposable income is spent on alcohol, with obvious consequences for the family, particularly children. The northern population finds it very difficult to understand the concept of responsible controlled drinking. 'Getting drunk' is often cherished as a culturally acceptable goal, especially in the appropriate social setting among peers.

Social, health and economic problems related to alcohol

Alcohol-related problems cover a broad range of adverse social and physical manifestations of alcohol use, and affect large proportions of the population. About 10% of Canadian adult drinkers have alcohol-related disabilities; this percentage includes both those with alcoholism or alcohol-dependency disabilities and those otherwise disabled as a result of their use of alcohol.

Alcohol-dependency syndrome

Approximately 5% of people with alcohol-related disabilities show an alcohol-dependency syndrome. About 1 in 20 Canadian adult drinkers have an alcohol-dependency syndrome resulting in:

- health problems leading to injuries, accidents, illness or death
- inability of the drinker to fulfill his/her social role in the family or community
- mental problems, such as depression or anxiety.

Features of the alcohol-dependency syndrome

Altered behavioral state

Altered subjective state

- loss of control over alcohol intake
- craving and drink-centredness, which can occur in a plateau or cyclical fashion

Altered biologic state

- withdrawal syndrome with sweats and shakes, hallucinations, seizures, delirium tremens, and drinking to relieve withdrawal syndrome
- change in alcohol tolerance
- blackouts[1]

[1]Amnesia during period of intoxication or associated fugue-like state precipitated by alcohol.

Alcohol-related problems

Alcohol-related problems include those which are directly related to alcohol abuse and others which are indirectly related. Some 17% of hospital beds are utilized for alcohol-related problems including:

- cirrhosis
- cardiomyopathy
- peptic ulcer
- pancreatitis
- pneumonia
- multiple trauma
- accident proneness
- burns
- fetal alcohol syndrome
- adverse drug interactions

Alcohol-related mortality

In 1980, alcohol-related fatalities were estimated at 8,000 deaths. Thus, an estimated 1 in every 10 Canadian deaths results from an alcohol-related condition.

National estimates on cirrhosis mortality rates

A key health problem has been the long-term rising trend in deaths from cirrhosis in Canada. Annual deaths due to cirrhosis of the liver were 2,838 in 1978 compared with 1,799 in 1970. During the period 1976-78, male cirrhosis rates temporarily stabilized, while female cirrhosis rates increased. However, in 1980 the number of cirrhosis deaths was noted to have decreased to 2,682 as compared to 2,838 in 1978. The upward trend in deaths from cirrhosis noted in the early and mid-1970s may have stabilized for females and declined in males in the last 2-3 years. The decline in cirrhosis mortality is consistent with stabilization in per capita alcohol consumption between 1980 and 1984.

Alcohol-related motor vehicle fatalities

The number of injuries and deaths caused by drinking drivers has grown every year until, in the 1980s, it results in more than 58% of all car drivers' deaths. Traffic accidents are the fourth cause of death in Canada and the main cause of death in people under 30 years of age. It has been estimated that, after 2000 hours, 1 in every 8 drivers on the road will have consumed an alcoholic beverage. In the last 6 years in Canada, 18,000 people have been killed by drinking drivers, with an average of 250 deaths/month. Young people aged 15-24 years have the highest alcohol-related fatality rates for driving and drinking. Out of an estimated total of 2,698 alcohol-related deaths on the nation's roads in 1980, an estimated 1,168, or 43% of the fatalities, involved young people. About 20% of all snowmobile accidents are caused by alcohol-intoxicated drivers.

Alcohol-related problems

- Mortality due to cirrhosis, alcohol poisoning, alcohol psychosis
- Coronary and respiratory diseases
- Cancer
- Occupational alcoholism
- Accidents involving the use of alcohol in farming, boating, automobile driving, flying, hunting
- Home fires directly related to alcohol
- Family disruption
- Divorce
- Child and wife abuse
- Incest
- Sexual offences
- Assaults
- Manslaughter
- Suicide

Alcohol-related family disturbances

In the late 1970s, about 27,000 children between 1 year and 14 years of age were suspected victims of alcohol-related child abuse. About 50% of all divorces are granted because of alcohol-related physical and mental cruelty. Up to 50% of social welfare cases involve families with alcohol-related problems, such as:

- marital difficulties
- juvenile delinquency
- general social maladjustment of families and individuals

Occupational alcoholism

In the late 1970s, an estimated 3.5-7% of the working population (700,000 people of Canada's 10 million employed) have experienced severe alcohol-related problems.

Alcohol problems are compounded in occupations such as professional sports, particularly in baseball. Tremendous demands are placed on young athletes of living up to a 'macho' image, based on the ability to drink large amounts of liquor.

Social aggression

Death by suicide and homicide are often related to alcohol. It is reported that up to 30% of suicides and up to 50% of homicides involve persons with a history of alcohol abuse. Approximately 25% of inmates of federal penitentiaries and provincial jails commit violent crimes which are alcohol-related, including robbery with violence, rapes and indecent assaults. Through the ages, sporting spectators who drink have been notorious for hooliganism.

- The original Olympics were suspended because of belligerent crowd behavior.
- In one 3-day period in 532 BC during the reign of Emperor Justinian, 30,000 Romans died in riots at the chariot races.

- In 1314, Edward II of England banned football because it led to drunken brawls among fourteenth century fans.
- In Lima, Peru in 1964, 300 people were killed and 500 injured during a soccer match.

It has been suggested that this type of behavior can be used to measure pressures and tensions in society; alcohol allows violence to be more readily released.

Adverse effects of alcohol on employment
• Low productivity rates • Absenteeism • Low worker morale • Increased accidents at work

Economics

The production, control and sale of alcohol in Canada are important economic activities and provide much government revenue.

Government revenue: during 1980 to 1981, alcoholic sales in Canada were 5.3 billion dollars of which 2.5 billion dollars or 46% was tax revenue for the federal and provincial governments. During 1981-2, Saskatchewan residents bought 238 million dollars of alcohol from the Liquor Board, with a net tax revenue to the Saskatchewan Provincial Government of 82 million dollars. The Saskatchewan Government net revenue from Liquor Board sales in 1983/84 will be approximately 125 million dollars.

Employment: in 1980, about 19,000 Canadian workers were directly employed in alcohol production and related manufacturing, accounting for 447 million dollars in total wages. During 1980 in Saskatchewan, the brewing industry employed 398 people with total salaries of 9.7 million dollars and paid 13.9 million dollars for material, supplies, fuel and electricity used in beer production and transportation. The sale of alcohol is directly linked to the entertainment, tourism and accommodation industries; during 1980 in Saskatchewan, the accommodation industry obtained 95 million dollars in alcohol sales which represents 38% of total income. This revenue supports the employment of people, purchase of materials and supplies and payment of utility fees and taxes.

Advertising: in 1981, about 8% of all Canadian advertising was alcohol-related, and the estimated cost of buying advertising space in the media was 91 million dollars excluding advertising agency costs.

Social costs

Alcohol-related social costs are difficult to estimate. In 1981-2, the Alcoholism Commission estimated that the net revenue to the Saskatchewan Provincial Government was 82 million dollars, whereas

the cost of alcohol abuse to Saskatchewan was estimated at 205 million dollars. This figure was based on problems related to employment, hospital admission, social assistance, jails and penitentiaries, and property damage and Alcoholism Commission costs (6-7 million dollars annually) related to alcohol problems. The figure would be considerably higher if court fees, physician payments and psychiatric care related to alcohol could have been identified and included in the costs; for every dollar of net revenue from the sale of alcohol, 2.5 dollars are spent on alcohol abuse.

Summary of epidemiology according to national alcohol consumption rates

- 88% of men and 80% of women drank alcohol once a year or more resulting in an average figure of 84% of the adult population consuming alcohol
- Current drinkers are much more numerous in younger age-groups, as are consumers of larger volumes of alcohol. At younger ages, the alcohol consumption patterns of women are very similar to those of men
- The higher the overall level of alcohol consumption in a given population, the higher the level of alcoholism in that population; thus, the high proportion of young adults consuming 14 or more drinks/week is a cause for great concern, particularly if drinking patterns established early in life remain more or less constant for a long period of time
- The number of current drinkers and the number of heavy consumers of alcohol are proportionately higher in the western provinces, and the drinking pattern of women is more similar to that of men in the western provinces than in eastern provinces
- Alcohol use occurs with proportionately greater frequency in larger urban areas than in smaller ones or rural areas
- The relationship between alcoholism and socioeconomic underdevelopment in northern Canada remains a very complex issue. It is clear that many socioeconomic problems in the north, such as high unemployment, poor housing, truancy and illiteracy, are greatly influenced by alcohol problems.

The WHO attitude to alcohol

The WHO has recently suggested that governments should restrict the availability of alcohol because of the increase in alcohol-related problems in the industrialized world. From a series of studies, the WHO has concluded that government attitudes to alcohol are ambiguous and that alcoholism has become concentrated in the middle classes. These findings come from several research groups that have studied drinking habits over a 25-year period from 1950-75 in coun-

tries such as Canada, USA, Finland, Ireland, the Netherlands, Poland and Switzerland. The WHO believes that countries should prevent the increase in availability of alcohol instead of seeking to derive more revenues from it. Traffic accidents and violence caused by drinking continue to figure prominently in industrial societies. According to the WHO, sex, age and social class have become less important in determining intake, alcohol consumption has risen and alcohol has become more acceptable.

Increasing alcohol consumption has been accompanied by a general increase in the adverse consequences of drinking. The spread of drinking to nearly all groups of the population and to an increasing number of social situations makes it more difficult to localize alcohol-related problems in any particular group or life-style. The number of alcohol-related problems seems to have shifted from the lower class and deviant sub-groups to the middle class. Middle class, upper class and drunken drivers have superseded the skid row inebriates as far as the number of alcohol problems are concerned. These developments, especially the increase in social drinking, have harmed the general health of the population.

Although governments have expanded health services for treating alcoholics, they have allowed relaxed restrictions on the purchase of alcohol and its consumption in public places. Government involvement in alcohol production and promotion has intensified in many respects; this has resulted in the reinforcement of vested interests in alcohol which may adversely affect the possibility of preventing alcohol problems in the future. However, the stabilizing alcohol consumption rates between 1981-4, combined with a growing interest in healthy lifestyles, indicates an increased awareness and understanding by society that alcohol is not simply a commodity to be enjoyed, but is a product that entails considerable social and health risks.

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Suicide in Saskatchewan: The Alcohol and Drug Connection

Report Highlights*

SADAC Research Report

— there were 133 suicides in 1985 and 139 in 1986 in Saskatchewan;
— 43% of suicides were by gunshot, 17% by hanging, 16% by drug overdose and 13% by carbon monoxide poisoning;
— the relationship between alcohol, drugs and suicide is complex: while substance abuse and suicide are strongly associated, association does not necessarily imply cause; at one level substances may only supply the courage or the tool required for an act that otherwise has no other substance abuse implications; at another level, substance abuse may represent an integral part of a victim's inability to find a way of coping with life;
— 20% of the victims had long-term or chronic problems with alcohol; an additional 19% had acute (over .08% mg.) levels of alcohol in their blood at the time of death; and 8% had lower levels of alcohol at the time of death; in total close to 47% of the victims had some form of alcohol involvement;
— 67% of the suicides were connected to alcohol or drugs at some level: 29% of the victims had involvement only with alcohol; 20% only with other drugs; and 18% with both alcohol and other drugs;
— apart from alcohol, the drugs most detected were psychotherapeutic prescription drugs.

Sex

— in 1985 and 1986, there were 210 male and 62 female victims; the male suicide rate was 3 times that for females;
— drugs were a major contributor to female deaths due to the higher proportion of drug overdoses among women; 73% of female victims had involvement with drugs other than alcohol, compared to 28% of males;
— alcohol involvement was more prevalent for men; half (51%) of the male victims had some alcohol involvement, while one-third (32%) of females had.

* Reprinted from *Suicide in Saskatchewan: The Alcohol and Drug Connection*. Regina: Saskatchewan Alcohol and Drug Abuse Commission, 1988.

Youth

— in 1985 and 1986 there were 98 suicides among persons under the age of 30: 26 were teenagers and 72 were in their twenties;
— 72% of victims in their twenties had some alcohol or drug involvement compared to 50% for teenagers;
— for both teenage victims and those in their twenties, alcohol was implicated more frequently than other drugs; 46% of the teens and 57% of twenty year-olds had involvement with alcohol.

Natives

— in 1985 and 1986 there were 56 suicide victims of Native ancestry;
— the suicide rate for residents of Indian Reserves was 3 to 4 times that of the overall Saskatchewan population; Native rates were higher for both men and women, and among all age groups;
— youth suicide constituted a much higher proportion of the total for Native victims; the suicide rate for teens and 20-29 year-old residents of Indian Reserves was approximately 5 times that for comparable ages in the general population;
— 75% of Native suicides had involvement with alcohol or drugs, compared to 64% of non-Natives;
— alcohol played a more significant role in Native suicides than did other drugs; 64% of Native victims had involvement with alcohol.

Alcohol and the Law*

Gwilym J. Davies, B.A., LL.B., LL.M.
Barrister, Edmonton, Alberta

A brief history

Alcoholic beverages have been known to mankind from time immemorial. However, along with the drinking of alcohol, there is evidence that there was always some form of social control over drinking habits and the behavior resulting from excessive use of alcohol.

Social controls, however, are but one of the three supposed limiting factors upon the use and abuse of alcoholic beverages. The other two are fiscal factors and laws. To some extent, laws are used to supply fiscal factors and, of course, are employed to supplement social control.

I have not attempted an exhaustive survey of the history of the association of drinking and the law. However, it is clear that from the earliest of times, the authorities were concerned with suppressing the vices associated with drinking alcohol. At the same time, it has to be noted that the governmental attitude towards alcoholic beverages has always been somewhat schizophrenic. While passing laws to discourage drunkenness, governments also passed laws regulating the trade in alcoholic beverages so as to provide governmental revenue. Things have not changed, particularly in Canada, where the governments virtually monopolize the traffic in alcoholic beverages.

Laws which govern the activities of providers and consumers of alcohol seek to diminish the misuse of alcohol by putting difficulties in the way of drinkers. Examples include:

- limiting the number of places where alcohol can be purchased and/or consumed
- limiting the number of hours for consumption
- prohibiting sale to drunken persons
- requiring license holders to ensure that these objectives are met.

Such laws, however, have never succeeded in diminishing misuse of alcohol. It has also been noted that fiscal control by manipulation of prices and imposition of taxes has also failed to achieve that objective, as measured by statistical data.

Prohibition vs. liberalization

In the past, at least two different and markedly divergent approaches to reform have been attempted. The prohibition movement called for the total suppression of the traffic in liquor. On the other hand, the liberal approach presently in effect in Canada and the

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United States relies upon self-discipline and the belief that social control will result from a natural aversion to the results of excessive use.

The prohibition movement surfaced during the eighteenth century in many parts of the world. However, at the same time, a legal structure was established in the United States for raising revenues from the sale of distilled liquors.

The climate regarding government support or opposition to alcohol was to change again and again, and the tug of war between governmental suppression of the liquor trade and governmental revenue-raising from it continues to this day.

Drinking and driving laws

Since its inception, the law regarding drinking and driving has grown increasingly complex, and in recent years, both more intrusive and more severe in its impact.

In 1906, the Criminal Code of Canada simply punished persons who wilfully caused bodily harm through actions such as wanton or furious driving without making any reference to impairment. In 1921, the law was changed to provide for punishment of those who drove while intoxicated, thus raising the interesting medical and legal question of the definition and measurement of 'intoxication'.

As is well known, subsequent legislation has employed a more objective and measurable standard of 'impairment' of ability to drive. More recent legislation, however, has gone much further in permitting punishment for having a given level of alcohol in the blood system without the necessity of showing either that actual harm was done or that actual impairment of ability to drive was caused.

Furthermore, proof of such offences by the use of mechanical devices operated by police officers has been authorized. The medical or scientific underpinning of these developments is, no doubt, well known to the medical profession. However, arguments continue, seemingly both in medical and legal circles, as to the universal validity of the underlying assumptions. For example, recently, an Ontario lower level court has questioned the propriety of the legal presumption that a blood alcohol reading taken up to two hours after the apparent commission of an impaired offence represents the blood alcohol concentration at that earlier time.

The basis of this questioning, of course, is that the presumption of impairment is almost certainly invalid. However, it remains to be seen whether appeal courts will support this position in the face of public concern about the social costs of drinking and driving.

Recently, the medical profession has been given a more prominent role to play in the area of impaired driving. The 1985 amendments to the Criminal Code provide for the issuing of warrants authorizing medical practitioners to take blood samples for the purpose of analysis when an accident has occurred. Such samples may be taken only if the qualified medical practitioner is satisfied that the deterior-

ated physical or mental condition of the subject (resulting from impairment or the accident) renders the subject unable to consent to the taking of blood samples. The medical practitioner must also be of the opinion that the taking of blood samples would not endanger the life or health of the potential accused.

These preconditions to the issuing of warrants require that the qualified medical practitioner provide the necessary information under oath to the Justice of the Peace who is being asked to issue the warrant, either in writing, or in the case of a telewarrant, verbally. Then, for the results of the analysis of the blood sample to be admissible by way of certificate, the qualified medical practitioner must provide a certificate as to his or her taking of the blood samples, or as to the taking of the samples by a qualified technician under direction of the qualified medical practitioner.

Drunkenness as a defence to criminal charges

Drunkenness can be of importance in determining legal responsibility for actions which constitute offences even when committed in a sober state.

For example, a person charged with an offence such as sexual assault or murder might have been suffering from the vice of intoxication at the time of committing the act involved. The law requires proof of the commission of the act (actus reus), and of the necessary intent (mens rea). Thus, the question is asked, 'How does drunkenness affect the decision as to guilt or otherwise?'

First of all, the courts draw a distinction between voluntary and involuntary drunkenness. The latter might occur, for example, if a person's drink was spiked so that he unknowingly consumed an excess of alcohol.

However, in situations in which drunkenness arises from voluntary consumption of alcoholic beverages, the approach of the courts is very different. First of all, it must be noted that the courts distinguish between what are called 'crimes of specific intent' and 'crimes of general intent'. There are also crimes in which the mental element consists of recklessness rather than specific or general intent.

The distinction between crimes of specific intent and crimes of general intent is elusive and has been criticized. Indeed, the distinction was primarily adopted and developed for the very purpose of narrowly limiting voluntary intoxication as a defence.

Although there have been problems with this distinction, it remains of importance in Canada. The result is that voluntary intoxication does not offer a defence to a crime of general intent, e.g. sexual assault, but does, in appropriate circumstances, to a crime of specific intent, e.g. breaking and entering with intent to commit an indictable offence or, more interestingly, murder. The specific intent required in relation to murder is the intent to kill.

Thus, in cases in which voluntary intoxication is concerned, it will offer a defence only in the following circumstances:

- where drunkenness produces insanity
- where a specific intent crime is involved, and the drunkenness was of such a degree that a reasonable doubt exists that the accused was capable of forming a specific intent required and, if so, that the conclusion in turn raises a reasonable doubt that he did in fact form that intent.

Thus, it becomes obvious that drunkenness as such is not a defence at all, but in certain narrowly prescribed circumstances may give rise to a reasonable doubt about one or another of the essential elements of the crime.

Since there are no Canadian cases exemplifying the first principle, i.e. insanity on the basis of intoxication alone, this principle is then of little practical significance. With regard to the second principle, since the accused must show proof of a severe degree of intoxication, this means that the 'defence' of voluntary intoxication to a specific intent crime will rarely succeed. It should be noted that, where the proof is provided in a murder case, it will result in a conviction for manslaughter. In less serious, so-called specific intent crimes, there is usually a conviction for a lesser offence, and only occasionally an acquittal.

Governments will continue to licence the sale and provision of alcoholic beverages. They will also continue to tax both sale and consumption and regulate the hours and conditions of consumption, sometimes taking a severe approach, sometimes a liberal approach.

The law no longer makes it an offence merely to be drunk, and there does not seem to be any likelihood that this will change.

The drinking and driving laws will probably change little in the foreseeable future. The recent amendments which have increased penalties and provided for the taking of blood samples without consent will probably be left alone for some time.

The issue of drunkenness as a 'defence' will probably receive little, if any, legislative attention and it will be up to the courts to make any changes if they see fit. In other jurisdictions, steps have been taken to create an offence of acute intoxication to cover the situation where a criminal act is committed, but guilt would not be found because the acute intoxication prevents conviction due to a lack of the necessary mental element. Whether or not such laws work well will not be reviewed here. It is doubted that any such step will be taken in Canada in the near future.

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The Physician in Court: Explaining the Effects of Alcohol and Alcohol Dependency

Saul Cohen, M.D.

The information below is useful for the physician appearing in a court case where the use of alcohol is an issue.

I. Background for interpretation of brain functions with relationship to general and specific intent

The brain is divided into three levels of function: the forebrain, mid brain, and hind brain. These are described below.

Level 1: Forebrain

The forebrain is our civilized level of function and stores information relating to reason and judgement, discrimination (i.e. caring/hurting/harming), memory, experience, and the ability to perceive risk factors (e.g. handling an automobile, boat, plane, or gun).

The forebrain contains an appraisal system which involves the capacity to appraise a situation, formulate a specific intent, and create a specific plan after weighing available options.

The forebrain is responsible for recognizing and judging the consequences of possible actions. This involves an appreciation of what is right and what is wrong in the eyes of society, based on behaviour codes learned as a child and fine tuned as an adult.

How we think and act as a result of forebrain deliberations is based on the forebrain plugging into its network of reason, judgement, discrimination, memory, experience, etc. This translates as "think now, act later".

Following arousal by the demands of a crisis or conflict, we step back into a moment of calm, and appraise the demand and our capacity to meet the demand. We consider the options open to us and then set up a strategy or plan to cope with the demand. For example, we might decide to avoid the situation, alter it, or adapt to it. In some situations, talking it out might be the most appropriate option, whereas in more extreme situations our choices might be to frighten, hurt, or kill.

Level 2: Mid brain

Mid brain function has to do with motor and sensory activities such as walking, talking, balance, coordination, seeing, hearing, smell, taste, and touch.

If our forebrain controls were cut off our actions would be determined by our mid brain function, based on the above activities. Arousal by outside crisis, conflict, or demand would be met by a simplistic instinctive response to avoid it, run away, or fight it.

If our forebrain were cut off, action would take precedence over thought. We would "act now and think later", due to hasty decisions based on our inability to plug into the options and strategies learned and stored in our forebrain. Our perceptions and interpretations would be altered.

In the event of the forebrain controls being cut off, our response to any demand would be a general one, without the ability to develop any specific plans. Rather than the result of deliberation, actions would be automatic, in the manner of repeated manoeuvres such as driving our car along a familiar route home.

Level 3: Hind brain

The hind brain provides a very primitive level of function consisting of a computer system which automatically controls breathing, temperature, heart rate, appetite, and sex drive.

Effect of alcohol on the forebrain

2-4 drinks (50-100 mg): disinhibiting effect, brakes removed on social controls.

4-8 drinks (100-200 mg): availability of the forebrain's computer storage system is diminished or "dissolved" temporarily. Poor connections make communication untrustworthy.

Various degrees of intoxication result, affecting locomotion, balance (e.g. staggering), vision (e.g. seeing double), and impulsivity (with possible consequent rashness, irresponsibility, accident proneness).

8-16 drinks (200-400 mg): anaesthetic effect. Sleepy, stuporous to comatose, threat of paralysis of breathing and heart rate centres.

When the civilized brain (forebrain) is functioning, an individual can usually weigh the consequences of a contemplated action before swinging into action. However, at the animal level of brain function we are unable to judge the appropriateness of our response to an outside threat. If we were operating solely on this level, our mental faculties would be grossly impaired so that we might over-react to such a threat with a magnified, unsophisticated, and unorthodox response, often accompanying a loss of ability to comprehend and appreciate the end results of our actions.

The situation described above would involve impaired perception and interpretation and impaired judgement in determining the extent of response to a threat. Diminished social conscience, misinterpretation of facts, impairment of situational evaluation processes, and lack of influence of previously established civilized behaviour patterns are other results.

II. Questions and answers

Following are answers to questions frequently asked by prosecuting attorneys in court cases.

How is alcohol absorbed and excreted by the body?

- Alcohol is readily absorbed from the empty gastrointestinal tract

and then distributed evenly according to water content of tissues. 20% is absorbed in the stomach and 80% is absorbed in the small intestine.

- C2H5OH is broken down into CO2 and H2O. This occurs 90% in the liver, and 10% in the skin, lungs, and kidneys.
- Upper/lower burn-off rates are in the range of 15 to 45 mg/hour, with an average rate of 30 mg/hr. These vary according to racial group, with Inuit and Indian people generally having lower rates than white people.

Does a habitual drinker have a greater tolerance for alcohol than a novice or social drinker?

Yes.

Can an alcoholic continue functioning even though he or she has consumed a large amount of liquor?

Yes. If repeatedly required to perform while intoxicated, the body adapts and learns to act as though the actual blood level was lower.

Can an alcoholic who is drunk still walk, talk, drive a car, and outwardly appear not too intoxicated?

Yes.

What is intoxication?

Intoxication is the effect of alcohol's sedative action on the brain leading to variable loss of control of thinking and behaviour patterns, gait, balance, coordination, and speech.

What is alcoholism?

Alcoholism is a disease caused by drug dependency with two major patterns of drinking:

- The "gulper" pattern which may involve loss of control in an explosive manner. There is continued drinking after one drink—the individual is always one drink away from a drunk, undergoing a marked personality change which may include aggressive trends.
- The "sipper" pattern, which involves an inability to abstain from alcohol on a daily basis, usually with no gross signs of impairment.

What factors determine blood alcohol concentrations?

Determining factors of blood alcohol concentrations include the percentage of beverage alcohol consumed, rapidity of intake, empty/full stomach, previous gastrectomy, body weight, and size and health of liver. Certain cultural groups such as the Japanese have a flush effect due to acetaldehyde, which discourages further intake of alcohol. There are some people who are very sensitive to alcohol with marked pylorospasm leading to nausea and vomiting.

Can chronic drinkers function better at higher concentrations of alcohol than occasional drinkers?

Yes. This is the result of two factors:
a. Physical tolerance, involving liver cells, enzyme systems, and brain cells.
b. Learned behaviour.

How does alcohol affect the brain and rest of the central nervous system?

- 2-4 drinks (blood level 50-100 mg %): loss of restraint; extravagance; expansiveness; loss of behaviour controls; and impairment of judgement, reason, and discrimination.
- 4-8 drinks (blood level 100-200 mg %): speech slurred; staggering gait; mood swings; poor coordination; loss of balance; and loss of depth perception.
- 8-16 drinks (blood level 200-400 mg %): sleepiness; stupor; and coma. The lethal dose is usually estimated at 400 mg % or over. The "computer centre" which controls appetite, sleep, sex drive, heart rate, and respiration is affected.

What is the effect of alcohol on thinking and emotion?

Alcohol is a sedative which can reduce the functioning activities of the central nervous system. Sensible, responsible thinking cannot exist without an alert brain which is receptive to outside stimuli and capable of assessing a situation and forming decisions based on stored memory of previous experiences and judgements. Alcohol sedates the higher civilized brain centre to the point where the ability to appreciate and evaluate a problem is lessened through restricted processes of association. Thus sedative influence of alcohol on the process of thinking results in:

- Reduced alertness.
- Less selectivity in reception of stimuli.
- Less ability to call on previous learned experiences, the more complex associations suffering most.

Does increased physical activity have any effect on alertness?

This relates to the so-called "stimulated drunk". Increased activity results in an increased release of adrenaline leading to stimulation and the appearance of being more alert. There are also effects on the neurotransmitters in brain cells: dopamine (euphoria, pleasure); norepinephrine (activity, fight, flight, alertness, energy, self-assertiveness); serotonin (regulated sleep, regulated mood).

What effect do high levels of alcohol have on thinking and behaviour?

Large amounts of alcohol remove the "brakes" from the civilized forebrain, with the usual mechanism of "think first - act later" being converted to "act now - think later". The effect on behaviour is to increase impulsiveness and the aggressive trends of the instinctive animal mid brain and to diminish social conscience.

Does drunkenness lead to physical aggression?

Yes. Homicides are strongly related to alcohol abuse in over 64% of cases.[1] Unpremeditated physical assault is the most serious crime related to alcohol abuse.

What is a black-out?

A black-out involves temporary amnesia, where the individual suffers a loss of memory concerning recent events.

[1] *SADAC Research Report: Suicide in Saskatchewan: The Alcohol and Drug Connection.* Regina: Saskatchewan Alcohol and Drug Abuse Commission, 1988.

SAUL COHEN, M.D.

Dr. Saul Cohen graduated from the University of Toronto Medical School in 1943. He started family practice in Melville in 1946, and was a well-known and respected family physician in Regina from 1954 till his retirement in 1988. He has had a special interest in alcohol-related problems for many years, and has worked energetically to improve diagnosis, treatment, and education in the field. In addition to publishing articles on this subject, he became the first Medical Consultant to the Saskatchewan Bureau on Alcoholism in 1959, and was Chairperson of the Saskatchewan Alcohol and Drug Abuse Commission from 1981 to 1988.

In 1986 he received the Saskatchewan Order of Merit for his contribution to the health and well-being of the people of Saskatchewan. He has also received a Senior Life Membership in the Canadian Medical Association for forty years of medical practice and his significant contribution to medicine in Saskatchewan.

He currently resides in Mississauga, Ontario, where he is associated with the alcohol treatment program at the Credit Valley Hospital.

Order form

Treating Alcohol Problems: The Family Physician's Guide is a concise but comprehensive guide to the treatment of alcohol dependency and other alcohol-related problems. Diagnosis, components of a treatment program, management of withdrawal and medical complications, special needs of specific populations, family support, and other areas of interest to the family physician are discussed.

Treating Alcohol Problems: Supplementary Readings is the companion volume to the above. It contains information in more depth on a variety of subjects related to alcohol problems.

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